

AA903406, AA903406 ok62c11.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 40 0.67
AA461270, AA461270 zx63b07.r1 Soares total fetus Nb2HF8 9w Ho... 40 0.67
AA927863, AA927863 om18a08.s1 Soares_NFL_T_GBC_S1 Homo sapien... 40 0.67
AA587486, AA587486 nn84e09.s1 NCI_CGAP_Br2 Homo sapiens cDNA ... 40 0.67
W47466, W47466 zc34h02.r1 Soares senescent fibroblasts NbHSF ... 40 0.67
AA022495, AA022495 ze70e04.s1 Soares fetal heart NbHH19W Homo... 40 0.67
AA460961, AA460961 zx63b07.s1 Soares total fetus Nb2HF8 9w Ho... 40 0.67
AA393904, AA393904 zt85e06.r1 Soares testis NHT Homo sapiens ... 40 0.67
AA872272, AA872272 oh72a11.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 40 0.67
W47341, W47341 zc34h02.s1 Soares senescent fibroblasts NbHSF ... 40 0.67
N72024, N72024 yz96g01.s1 Homo sapiers cDNA clone 290928 3'. 40 0.67
N35076, N35076 yy19b08.s1 Homo sapiens cDNA clone 271671 3'. 40 0.67
AA813115, AA813115 aj44d06.s1 Soares testis NHT Homo sapiens ... 40 0.67
AA826741, AA826741 85f12.s1 NCI_CGAP_Pr24 Homo sapiens cDNA... 40 0.67
AA160827, AA160827 zo62e01.s1 Stratagene pancreas (#937208) H... 40 0.67
AI040354, AI040354 oy33d12.x1 Soares_parathyroid_tumor_NbHPA ... 40 0.67
AA573297, AA573297 nk98d09.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 40 0.67
AA416559, AA416559 zu18c03.r1 Soares NhHMPu S1 Homo sapiens c... 40 0.67
AA401079, AA401079 zv66d01.s1 Soares total fetus Nb2HF8 9w Ho... 40 0.67
AI005204, AI005204 ou60c12.x1 NCI_CGAP_Br2 Homo sapiens cDNA ... 40 0.67
N21678, N21678 yx63g01.s1 Soares melanocyte 2NbHM Homo sapien... 40 0.67
AA824270, AA824270 aj29f01.s1 Soares testis NHT Homo sapiens ... 40 0.67
AA804907, AA804907 oa89a01.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 40 0.67
AA759038, AA759038 ah75h11.s1 Soares testis NHT Homo sapiens ... 40 0.67
AA417295, AA417295 zu18c03.s1 Soares NhHMPu S1 Homo sapiens c... 40 0.67
AA628544, AA628544 af27h12.s1 Soares total fetus Nb2HF8 9w Ho... 40 0.67
AA618498, AA618498 np30a11.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 40 0.67
AA503727, AA503727 ne49g02.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 40 0.67
AA514777, AA514777 ni24b01.s1 NCI_CGAP_Co4 Homo sapiens cDNA ... 40 0.67
AA040802, AA040802 zf07g05.s1 Soares fetal heart NbHH19W Homo... 40 0.67
AA770473, AA770473 ah89h06.s1 Soares NFL T GBC S1 Homo sapien... 40 0.67
AA759377, AA759377 ah54a10.s1 Soares testis NHT Homo sapiens ... 40 0.67
AA629243, AA629243 zu77e03.s1 Soares testis NHT Homo sapiens ... 40 0.67
AA262162, AA262162 zs25b12.r1 NCI_CGAP_GCB1 Homo sapiens cDNA... 40 0.67
AA161105, AA161105 zo58c05.s1 Stratagene pancreas (#937208) H... 38 2.6
AA852281, AA852281 NHTBCae11g05r1 Normal Human Trabecular Bon... 38 2.6
AA948291, AA948291 oq34d02.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 38 2.6
AA416734, AA416734 zu08c01.s1 Soares testis NHT Homo sapiens ... 38 2.6
N98472, N98472 yy65a04.r1 Homo sapiens cDNA clone 278382 5'. 38 2.6
AA416815, AA416815 zu08c01.r1 Soares testis NHT Homo sapiens ... 38 2.6
AA431486, AA431486 zw72g01.s1 Soares testis NHT Homo sapiens ... 38 2.6
H30248, H30248 yp42a01.s1 Homo sapiens cDNA clone 190056 3'. 38 2.6
R82551, R82551 yj19d06.r1 Homo sapiens cDNA clone 149195 5'. 38 2.6

AA616807, AA616807 vn68c05.r1 Barstead mouse irradiated colon... 180 1e-43
AA014223, AA014223 mh20a03.r1 Soares mouse placenta 4NbMP13.5... 40 0.24
AA014768, AA014768 mi66h04.r1 Soares mouse embryo NbME13.5 14... 40 0.24
AA185487, AA185487 mt62c07.r1 Soares 2NbMT Mus musculus cDNA ... 40 0.24
AA103139, AA103139 mo17f05.r1 Life Tech mouse embryo 13 5dpc ... 40 0.24
AI048515, AI048515 uh61e08.r1 Soares mouse embryonic stem cel... 40 0.24
AA711859, AA711859 vu59c10.r1 Soares mouse mammary gland NbMM... 40 0.24
AA009071, AA009071 mg87b11.r1 Soares mouse embryo NbME13.5 14... 40 0.24
AA276740, AA276740 vc42a12.r1 Soares mouse 3NbMS Mus musculus... 40 0.24
AA497479, AA497479 vh29b12.r1 Soares mouse mammary gland NbMM... 40 0.24
AA038869, AA038869 mi95b10.r1 Soares mouse p3NMF19.5 Mus musc... 40 0.24
AA790448, AA790448 vw04f09.r1 Soares mouse mammary gland NbMM... 40 0.24
AA881111, AA881111 vz06e09.r1 Soares mouse mammary gland NbMM... 40 0.24
AA007762, AA007762 mg76b03.r1 Soares mouse embryo NbME13.5 14... 40 0.24
W83172, W83172 mf09a06.r1 Soares mouse p3NMF19.5 Mus musculus... 40 0.24
AA106439, AA106439 ml59a08.r1 Stratagene mouse testis (#93730... 40 0.24
AA000268, AA000268 mg32e09.r1 Soares mouse embryo NbME13.5 14... 40 0.24
AI047077, AI047077 uh61g06.r1 Soares mouse embryonic stem cel... 40 0.24
AA543280, AA543280 vj80h05.r1 Soares mouse mammary gland NbMM... 40 0.24
AA106301, AA106301 ml81a09.r1 Stratagene mouse kidney (#93731... 40 0.24
AA467482, AA467482 ve01a10.r1 Soares mouse NbMH Mus musculus ... 40 0.24
AA797372, AA797372 vw27b08.r1 Soares mouse mammary gland NbMM... 40 0.24
W77724, W77724 me84h06.r1 Soares mouse embryo NbME13.5 14.5 M... 40 0.24
AA049011, AA049011 mj48c09.r1 Soares mouse embryo NbME13.5 14... 40 0.24
AA763419, AA763419 vw54a12.r1 Soares mouse mammary gland NMLM... 40 0.24
AA138067, AA138067 mq37c11.r1 Barstead MPLRB1 Mus musculus cD... 40 0.24
AA475425, AA475425 vh20g09.r1 Soares mouse mammary gland NbMM... 40 0.24
AA469884, AA469884 vf71g10.r1 Barstead mouse pooled organs MP... 40 0.24
AA016868, AA016868 mh36e12.r1 Soares mouse placenta 4NbMP13.5... 40 0.24
AA230758, AA230758 my32g10.r1 Barstead mouse pooled organs MP... 40 0.24
AA833479, AA833479 uc91c03.r1 Soares mouse uterus NMPu Mus mu... 40 0.24
W61547, W61547 md57a02.r1 Soares mouse embryo NbME13.5 14.5 M... 40 0.24
AA033481, AA033481 mi42b07.r1 Soares mouse embryo NbME13.5 14... 40 0.24
AA068686, AA068686 mm59a03.r1 Stratagene mouse embryonic carc... 38 0.94
AA796056, AA796056 vo65d01.r1 Soares mouse mammary gland NbMM... 36 3.7
C87249, C87249 Mus musculus fertilized egg cDNA 3'-end seque... 36 3.7
AA921560, AA921560 vy52c06.r1 Stratagene mouse lung 937302 Mu... 36 3.7
W87202, W87202 mf55g08.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.7
AA542324, AA542324 vk53e07.r1 Stratagene mouse Tcell 937311 M... 36 3.7
AA967316, AA967316 vj47a03.r1 Stratagene mouse skin (#937313)... 36 3.7
W62989, W62989 md88h12.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.7
AA530735, AA530735 vj32g11.r1 Stratagene mouse diaphragm (#93... 36 3.7
AA218431, AA218431 my07e05.r1 Barstead mouse lung MPLRB2 Mus ... 36 3.7
AA591243, AA591243 vm18c04.r1 Knowles Solter mouse blastocyst... 36 3.7

AI047609, AI047609 uh63g07.r1 Soares mouse embryonic stem cel... 36 3.7
 AA692425, AA692425 vt59b05.r1 Barstead mouse irradiated colon... 36 3.7
 AA966976, AA966976 ua38f11.r1 Soares mouse mammary gland NbMM... 36 3.7
 AA856298, AA856298 vw99b01.r1 Soares 2NbMT Mus musculus cDNA ... 36 3.7
 W20935, W20935 mb96c07.r1 Soares mouse p3NMF19.5 Mus musculus... 36 3.7
 AA230661, AA230661 mw15f08.r1 Soares mouse 3NME12.5 Mus muscu... 36 3.7
 AA111190, AA111190 mp66b11.r1 Soares 2NbMT Mus musculus cDNA ... 36 3.7
 AA840087, AA840087 uc99h12.r1 Soares mouse uterus NMPu Mus mu... 36 3.7
 AA089210, AA089210 mo05d10.r1 Stratagene mouse lung 937302 Mu... 36 3.7
 AI035925, AI035925 ub49e05.r1 Soares mouse mammary gland NbMM... 36 3.7
 AA824205, AA824205 vy20g08.r1 Stratagene mouse macrophage (#9... 36 3.7
 AA793845, AA793845 vr35e12.r1 Barstead mouse myotubes MPLRB5 ... 36 3.7
 AA239210, AA239210 mx89e02.r1 Soares mouse NML Mus musculus c... 36 3.7
 AA711873, AA711873 vu28e06.r1 Barstead mouse myotubes MPLRB5 ... 36 3.7
 AA645119, AA645119 vs72d03.r1 Stratagene mouse skin (#937313)... 36 3.7

AA957268, AA957268 UI-R-E1-fq-e-06-0-UI.s1 UI-R-E1 Rattus nor... 42 0.053
 C83463, C83463 Oryctolagus cuniculus corneal endothelial cDN... 38 0.84
 AA859448, AA859448 UI-R-A0-bf-b-01-0-UI.s1 UI-R-A0 Rattus nor... 38 0.84
 AA874930, AA874930 UI-R-E0-ci-b-05-0-UI.s1 UI-R-E0 Rattus nor... 38 0.84
 C82607, C82607 Oryctolagus cuniculus corneal endothelial cDN... 38 0.84
 AI009631, AI009631 EST204082 Normalized rat lung, Bento Soare... 38 0.84
 AA801145, AA801145 EST190642 Normalized rat ovary, Bento Soar... 38 0.84
 AI012760, AI012760 EST207211 Normalized rat placenta, Bento S... 38 0.84
 AA956139, AA956139 UI-R-E1-fi-h-08-0-UI.s1 UI-R-E1 Rattus nor... 38 0.84
 AA801144, AA801144 EST190641 Normalized rat ovary, Bento Soar... 38 0.84
 AA660819, AA660819 00713 MtRHE Medicago truncatula cDNA 5' 38 0.84
 AA859865, AA859865 UI-R-E0-cc-b-04-0-UI.s1 UI-R-E0 Rattus nor... 38 0.84
 AI009035, AI009035 EST203486 Normalized rat embryo, Bento Soa... 38 0.84
 AA859542, AA859542 UI-R-E0-br-d-03-0-UI.s1 UI-R-E0 Rattus nor... 38 0.84
 T00613, T00613 wEST01334 Caenorhabditis elegans cDNA clone CE... 38 0.84
 H32878, H32878 EST108396 Rat PC-12 cells, untreated Rattus sp... 36 3.3
 AA125602, AA125602 JM00M011.QM3 Miracidia Sjc 3/96 Schistosom... 36 3.3
 D45997, RICS10346A Rice cDNA, partial sequence (S10346_1A). 36 3.3
 AA943364, AA943364 EST198863 Normalized rat brain, Bento Soar... 36 3.3
 C68472, C68472 C.elegans cDNA clone yk305a12 : 5' end, singl... 36 3.3
 AA785775, AA785775 h4b05a1.f1 Aspergillus nidulans 24hr asexu... 36 3.3
 D46069, RICS10475A Rice cDNA, partial sequence (S10475_1A). 36 3.3
 AA660859, AA660859 00754 MtRHE Medicago truncatula cDNA 5' si... 36 3.3
 Z33974, ATTS3035 A. thaliana transcribed sequence; clone PAP... 36 3.3
 Z32603, ATTS2731 A. thaliana transcribed sequence; clone PAP... 36 3.3
 AA955567, AA955567 UI-R-E1-fa-a-08-0-UI.s1 UI-R-E1 Rattus nor... 36 3.3
 AA842765, AA842765 M-EST080 Sugarcane mature stalk Saccharum ... 36 3.3
 Z32602, ATTS2730 A. thaliana transcribed sequence; clone PAP... 36 3.3

SEQ ID NO:548

U66197, HSU66197 Human fibroblast growth factor homologous fa... 42 0.34
 AF020738, AF020738 Mus musculus fibroblast growth factor-rela... 42 0.34
 U66201, MMU66201 Mus musculus fibroblast growth factor homolo... 42 0.34
 Z46966, MMIMOGN44 M.musculus mRNA for imogen 44. 40 1.3
 AC004301, AC004301 Drosophila melanogaster DNA sequence (P1 D... 40 1.3
 U86662, LEU86662 Lycopersicon esculentum VPS41 (tVPS41) mRNA.... 40 1.3
 U85773, HSU85773 Human phosphomannomutase (PMM2) mRNA, comple... 40 1.3

HUMAN ESTs

W22160, W22160 63A6 Human retina cDNA Tsp509I-cleaved sublibr... 791 0.0
 AA860926, AA860926 ak22d06.s1 Soares testis NHT Homo sapiens ... 650 0.0
 AA348243, AA348243 EST54707 Hippocampus I Homo sapiens cDNA 5... 513 e-143
 AA551799, AA551799 nk04a11.s1 NCI_CGAP_Co2 Homo sapiens cDNA ... 363 3e-98
 AA327309, AA327309 EST30621 Colon I Homo sapiens cDNA 5' end 353 3e-95
 AA344913, AA344913 EST50856 Gall bladder II Homo sapiens cDNA... 337 2e-90
 AA121198, AA121198 zl88g08.r1 Stratagene colon (#937204) Homo... 317 2e-84
 AA121174, AA121174 zl88g08.s1 Stratagene colon (#937204) Homo... 317 2e-84
 AA001561, AA001561 ze46e07.s1 Soares retina N2b4HR Homo sapie... 42 0.16
 AA041240, AA041240 zf07g05.r1 Soares fetal heart NbHH19W Homo... 40 0.64
 AA039536, AA039536 zk39h10.s1 Soares pregnant uterus NbHPU Ho... 40 0.64
 AA040802, AA040802 zf07g05.s1 Soares fetal heart NbHH19W Homo... 40 0.64
 AA573297, AA573297 nk98d09.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 40 0.64
 N35888, N35888 yy28b05.s1 Homo sapiens cDNA clone 272529 3'. 40 0.64
 AA888147, AA888147 04h11.s1 NCI_CGAP_Co10 Homo sapiens cDNA... 40 0.64
 AA172158, AA172158 zp29a01.s1 Stratagene neuroepithelium (#93... 40 0.64
 AA877455, AA877455 ob33g01.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 40 0.64
 R02514, R02514 ye70b08.r1 Homo sapiens cDNA clone 123063 5'. 40 0.64
 AA514777, AA514777 ni24b01.s1 NCI_CGAP_Co4 Homo sapiens cDNA ... 40 0.64
 AA416734, AA416734 zu08c01.s1 Soares testis NHT Homo sapiens ... 38 2.5
 N98472, N98472 yy65a04.r1 Homo sapiens cDNA clone 278382 5'. 38 2.5
 AA416815, AA416815 zu08c01.r1 Soares testis NHT Homo sapiens ... 38 2.5
 AA431486, AA431486 zw72g01.s1 Soares testis NHT Homo sapiens ... 38 2.5
 AA948291, AA948291 oq34d02.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 38 2.5
 AA852281, AA852281 NHITBCae11g05r1 Normal Human Trabecular Bon... 38 2.5

AA616807, AA616807 vn68c05.r1 Barstead mouse irradiated colon... 180 1e-43
 AA469884, AA469884 vf71g10.r1 Barstead mouse pooled organs MP... 40 0.23
 AA230758, AA230758 my32g10.r1 Barstead mouse pooled organs MP... 40 0.23
 AA038869, AA038869 mi95b10.r1 Soares mouse p3NMF19.5 Mus musc... 40 0.23
 AA763419, AA763419 vw54a12.r1 Soares mouse mammary gland NMLM... 40 0.23
 AA185487, AA185487 mt62c07.r1 Soares 2NbMT Mus musculus cDNA ... 40 0.23
 AA106439, AA106439 ml59a08.r1 Stratagene mouse testis (#93730... 40 0.23
 AA276740, AA276740 vc42a12.r1 Soares mouse 3NbMS Mus musculus... 40 0.23
 AA068686, AA068686 mm59a03.r1 Stratagene mouse embryonic carc... 38 0.91
 AA711873, AA711873 vu28e06.r1 Barstead mouse myotubes MPLRB5 ... 36 3.6
 AA856298, AA856298 vw99b01.r1 Soares 2NbMT Mus musculus cDNA ... 36 3.6
 W20935, W20935 mb96c07.r1 Soares mouse p3NMF19.5 Mus musculus... 36 3.6
 AA966976, AA966976 ua38f11.r1 Soares mouse mammary gland NbMM... 36 3.6
 AA921560, AA921560 vy52c06.r1 Stratagene mouse lung 937302 Mu... 36 3.6
 AA692425, AA692425 vt59b05.r1 Barstead mouse irradiated colon... 36 3.6
 W87202, W87202 mf55g08.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.6
 AA840087, AA840087 uc99h12.r1 Soares mouse uterus NMPu Mus mu... 36 3.6
 AA111190, AA111190 mp66b11.r1 Soares 2NbMT Mus musculus cDNA ... 36 3.6
 AA239210, AA239210 mx89e02.r1 Soares mouse NML Mus musculus c... 36 3.6
 AA793845, AA793845 vr35e12.r1 Barstead mouse myotubes MPLRB5 ... 36 3.6
 AA645119, AA645119 vs72d03.r1 Stratagene mouse skin (#937313)... 36 3.6
 AA230661, AA230661 mw15f08.r1 Soares mouse 3NME12.5 Mus muscu... 36 3.6
 AA824205, AA824205 vy20g08.r1 Stratagene mouse macrophage (#9... 36 3.6
 C87249, C87249 Mus musculus fertilized egg cDNA 3'-end seque... 36 3.6
 AA967316, AA967316 vj47a03.r1 Stratagene mouse skin (#937313)... 36 3.6
 AA591243, AA591243 vm18c04.r1 Knowles Solter mouse blastocyst... 36 3.6
 AI035925, AI035925 ub49e05.r1 Soares mouse mammary gland NbMM... 36 3.6
 AA530735, AA530735 vj32g11.r1 Stratagene mouse diaphragm (#93... 36 3.6
 AA218431, AA218431 my07e05.r1 Barstead mouse lung MPLRB2 Mus ... 36 3.6
 W62989, W62989 md88h12.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.6
 AA089210, AA089210 mo05d10.r1 Stratagene mouse lung 937302 Mu... 36 3.6
 AA796056, AA796056 vo65d01.r1 Soares mouse mammary gland NbMM... 36 3.6
 AA542324, AA542324 vk53e07.r1 Stratagene mouse Tcell 937311 M... 36 3.6

AA957268, AA957268 UI-R-E1-fq-e-06-0-UI.s1 UI-R-E1 Rattus nor... 42 0.052
 T00613, T00613 wEST01334 Caenorhabditis elegans cDNA clone CE... 38 0.81
 AA660819, AA660819 00713 MtRHE Medicago truncatula cDNA 5' ... 38 0.81
 AA956139, AA956139 UI-R-E1-fi-h-08-0-UI.s1 UI-R-E1 Rattus nor... 38 0.81
 D46069, RICS10475A Rice cDNA, partial sequence (S10475_1A). 36 3.2
 AA842765, AA842765 M-EST080 Sugarcane mature stalk Saccharum ... 36 3.2
 AA955567, AA955567 UI-R-E1-fa-a-08-0-UI.s1 UI-R-E1 Rattus nor... 36 3.2
 Z33974, ATTS3035 A. thaliana transcribed sequence; clone PAP... 36 3.2
 H32878, H32878 EST108396 Rat PC-12 cells, untreated Rattus sp... 36 3.2
 AA660859, AA660859 00754 MtRHE Medicago truncatula cDNA 5' si... 36 3.2

D45997, RICS10346A Rice cDNA, partial sequence (S10346_1A). 36 3.2
 Z32603, ATTS2731 *A. thaliana* transcribed sequence; clone PAP... 36 3.2
 AA785775, AA785775 h4b05a1.f1 *Aspergillus nidulans* 24hr asexu... 36 3.2
 C68472, C68472 *C.elegans* cDNA clone yk305a12 : 5' end, singl... 36 3.2
 AA125602, AA125602 JM00M011.QM3 Miracidia Sjc 3/96 *Schistosom...* 36 3.2
 AA943364, AA943364 EST198863 Normalized rat brain, Bento Soar... 36 3.2
 Z32602, ATTS2730 *A. thaliana* transcribed sequence; clone PAP... 36 3.2

SEQ ID NO:549

U79271, HSU79271 Human clones 23920 and 23921 mRNA sequence 650 0.0
 AC000395, AC000395 Genomic sequence from Human 9q34. complete... 42 0.28
 AC004636, AC004636 *Homo sapiens* chromosome 5, P1 clone 1268h6... 42 0.28
 M94579, HUMCEL Human carboxyl ester lipase (CEL) gene, comple... 42 0.28
 AC002097, AC002097 *Homo sapiens* chromosome 9q34, clone 246H5,... 42 0.28
 AB006709, AB006709 *Vibrio alginolyticus* rpoN gene for RNA po... 42 0.28
 Z47074, CEK07C10 *Caenorhabditis elegans* cosmid K07C10. compl... 40 1.1
 AC004755, AC004755 *Homo sapiens* chromosome 19, fosmid 37502, ... 40 1.1
 Z28051, SCYKL051W *S.cerevisiae* chromosome XI reading frame O... 40 1.1
 AF022655, AF022655 *Homo sapiens* cep250 centrosome associated ... 40 1.1
 AB006708, AB006708 *Arabidopsis thaliana* genomic DNA, chromos... 40 1.1
 AF049105, AF049105 *Homo sapiens* centrosomal Nek2-associated p... 40 1.1
 Z28050, SCYKL050C *S.cerevisiae* chromosome XI reading frame O... 40 1.1
 X75781, SCXI286K *S.cerevisiae* chromosome XI (28.6 kb) DNA fo... 40 1.1
 Y16899, DMY16899 *Drosophila melanogaster* mRNA for optomotor-... 38 4.3
 M87854, RATBARK1 *Rattus norvegicus* beta-adrenergic receptor k... 38 4.3
 M74822, RATMHTLL Rat MHC class I TL-like protein gene, comple... 38 4.3
 M80776, HUMBARK1A Human beta-adrenergic receptor kinase 1 mRN... 38 4.3
 D84549, YSACA *Candida tropicalis* DNA for carnitine acetyltra... 38 4.3
 L23127, RATRMCI *Rattus norvegicus* germline MHC class I gene, ... 38 4.3
 AC004257, AC004257 *Homo sapiens* chromosome 19, cosmid R33209.... 38 4.3
 U70850, CELF28F9 *Caenorhabditis elegans* cosmid F28F9 38 4.3
 U88309, CELT23B3 *Caenorhabditis elegans* cosmid T23B3 38 4.3
 X53421, DVCHOS18 *D. virilis* s18, s15, s19, s16 chorion prote... 38 4.3
 D89245, D89245 *Schizosaccharomyces pombe* mRNA, partial cds, ... 38 4.3
 AF009623, AF009623 *Parascaris univalens* PUMA1 (puma1) mRNA, c... 38 4.3
 S48813, S48813 beta-adrenergic receptor kinase [rats, brain, ... 38 4.3
 Z67883, CEK02A4 *Caenorhabditis elegans* cosmid K02A4, complet... 38 4.3
 U90567, GGU90567 *Gallus gallus* glutamine rich protein mRNA, p... 38 4.3
 M98498, BOVEZRINA *Bos taurus* ezrin mRNA, complete cds. 38 4.3
 M34073, MUSMHT10C *Mus musculus* (clone T10-c) MHC class I cell... 38 4.3

S81843, S81843 beta-adrenergic receptor kinase 1 [Syrian hams... 38 4.3
 X61157, HSBARK_H.sapiens mRNA for beta-adrenergic receptor k... 38 4.3
 U08438, HSNBARKS4 Human beta-adrenergic receptor kinase (ADRB... 38 4.3
 U39674, CELC06E2 Caenorhabditis elegans cosmid C06E2. 38 4.3

HUMAN ESTs

W29097, W29097 56d11 Human retina cDNA randomly primed sublib... 1045 0.0
 AA886109, AA886109 ny44f05.s1 NCI_CGAP_Pr12 Homo sapiens cDNA... 656 0.0
 AA829894, AA829894 oe51e12.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ... 650 0.0
 AA879456, AA879456 oj91g03.s1 Soares_NFL_T_GBC_S1 Homo sapien... 650 0.0
 AA029201, AA029201 zk12f08.s1 Soares pregnant uterus NbHPU Ho... 650 0.0
 AA102109, AA102109 zk87g11.s1 Soares pregnant uterus NbHPU Ho... 650 0.0
 AA843811, AA843811 ak09c08.s1 Soares parathyroid tumor NbHPA ... 650 0.0
 W72147, W72147 zd70f08.s1 Soares fetal heart NbHH19W Homo sap... 650 0.0
 N51485, N51485 yz04e06.s1 Homo sapiens cDNA clone 282082 3'. 650 0.0
 AI033069, AI033069 ow93f02.s1 Soares_fetal_liver_spleen_INFLS... 642 0.0
 AA161465, AA161465 zo73a06.s1 Stratagene pancreas (#937208) H... 638 0.0
 N51277, N51277 yz14d07.s1 Homo sapiens cDNA clone 283021 3'. 636 e-180
 N64528, N64528 yz91e06.s1 Homo sapiens cDNA clone 290434 3'. 636 e-180
 H99906, H99906 yx32h10.s1 Homo sapiens cDNA clone 263491 3'. 636 e-180
 AA812519, AA812519 ai79b03.s1 Soares testis NHT Homo sapiens ... 636 e-180
 R71679, R71679 yj85e08.s1 Homo sapiens cDNA clone 155558 3'. 628 e-178
 AA744290, AA744290 ny51d02.s1 NCI_CGAP_Pr18 Homo sapiens cDNA... 626 e-177
 AI038590, AI038590 ox34e03.s1 Soares_total_fetus_Nb2HF8_9w Ho... 624 e-177
 AA099913, AA099913 zk87g11.r1 Soares pregnant uterus NbHPU Ho... 624 e-177
 AA083859, AA083859 zn16d06.s1 Stratagene neuroepithelium NT2R... 622 e-176
 AA883684, AA883684 al58a05.s1 Soares NFL T GBC S1 Homo sapien... 613 e-173
 R39448, R39448 yc95d03.s1 Homo sapiens cDNA clone 23921 3'. 593 e-167
 R36854, R36854 yf52c07.s1 Homo sapiens cDNA clone 25899 3'. 591 e-167
 H98684, H98684 yx17g01.s1 Homo sapiens cDNA clone 262032 3'. 585 e-165
 R07471, R07471 ye97a06.s1 Homo sapiens cDNA clone 125650 3'. 581 e-164
 AA910762, AA910762 ol25h06.s1 Soares_NFL_T_GBC_S1 Homo sapien... 559 e-157
 AA083954, AA083954 zn17d06.s1 Stratagene neuroepithelium NT2R... 555 e-156
 AA346369, AA346369 EST52776 Fetal heart II Homo sapiens cDNA ... 545 e-153
 R54092, R54092 yg98d07.s1 Homo sapiens cDNA clone 41818 3'. 539 e-151
 H09074, H09074 yl97a06.s1 Homo sapiens cDNA clone 46164 3'. 535 e-150
 N21975, N21975 yw30c10.s1 Homo sapiens cDNA clone 253746 3'. 533 e-149
 D59844, HUM070E11A Human fetal brain cDNA 3'-end GEN-070E11. 466 e-129
 H11525, H11525 ym15h07.s1 Homo sapiens cDNA clone 48232 3'. 442 e-122
 AA971254, AA971254 op73c08.s1 Soares_NFL_T_GBC_S1 Homo sapien... 442 e-122
 W77907, W77907 zd70f08.r1 Soares fetal heart NbHH19W Homo sap... 428 e-118
 AA878973, AA878973 oj26d11.s1 NCI_CGAP_Kid3 Homo sapiens cDNA... 389 e-106
 AA715235, AA715235 nv10g01.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 357 2e-96

AA328928, AA328928 EST32475 Embryo, 12 week I Homo sapiens cD... 355 7e-96
AA860455, AA860455 aj80f02.s1 Soares parathyroid tumor NbHPA ... 283 2e-74
AA026096, AA026096 ze97a04.r1 Soares fetal heart NbHH19W Homo... 268 1e-69
AA026516, AA026516 ze97a04.s1 Soares fetal heart NbHH19W Homo... 172 6e-41
T26899, T26899 ESTDIR509 Homo sapiens cDNA clone CDDIR509 3'. 170 2e-40
N71178, N71178 yw30c10.r1 Homo sapiens cDNA clone 253746 5'. 165 1e-38
AA372290, AA372290 EST84170 Raji cells, cyclohexamide treated... 98 3e-18
AI038890, AI038890 ox84g12.x1 Soares_senescence_fibroblasts_Nb... 40 0.53
D81647, HUM180D08B Human fetal brain cDNA 5'-end GEN-180D08. 38 2.1
AA452630, AA452630 zx33f08.r1 Soares total fetus Nb2HF8 9w Ho... 38 2.1
AA682624, AA682624 zi19g01.s1 Soares fetal liver spleen 1NFLS... 38 2.1
AA742364, AA742364 ny89c12.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 38 2.1
AA907234, AA907234 ol03h08.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ... 38 2.1
T09391, T09391 EST07284 Homo sapiens cDNA clone HIBBT71 5' en... 38 2.1
AA161236, AA161236 zo59h07.s1 Stratagene pancreas (#937208) H... 38 2.1
AA252941, AA252941 zr50g09.r1 Soares NhHMPu S1 Homo sapiens c... 38 2.1
AA252245, AA252245 zr64g07.s1 Soares NhHMPu S1 Homo sapiens c... 38 2.1
AA780678, AA780678 ac70h01.s1 Stratagene fetal retina 937202 ... 38 2.1
W05501, W05501 za84a12.r1 Soares fetal lung NbHL19W Homo sapi... 38 2.1
AI039908, AI039908 ox25f07.x1 Soares_total_fetus_Nb2HF8_9w Ho... 38 2.1
AA280664, AA280664 zs99f09.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 38 2.1
AA973566, AA973566 oo46f09.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ... 38 2.1
N27253, N27253 yx17g01.r1 Homo sapiens cDNA clone 262032 5'. 38 2.1
AA995707, AA995707 os29c09.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 38 2.1
AI016407, AI016407 ot72e09.s1 Soares_total_fetus_Nb2HF8_9w Ho... 38 2.1
N70619, N70619 za84a12.s1 Homo sapiens cDNA clone 299230 3'. 38 2.1
AA242923, AA242923 zr64g07.r1 Soares NhHMPu S1 Homo sapiens c... 38 2.1
AA938631, AA938631 oo96f07.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 38 2.1
AA985290, AA985290 am74g03.s1 Stratagene schizo brain S11 Hom... 38 2.1

AA690806, AA690806 vt25h10.r1 Barstead mouse myotubes MPLRB5 ... 377 e-103
AA155014, AA155014 mr99h05.r1 Stratagene mouse embryonic carc... 180 8e-44
AA269966, AA269966 va57d06.r1 Soares mouse 3NME12 5 Mus muscu... 172 2e-41
AA089195, AA089195 mo05h11.r1 Stratagene mouse lung 937302 Mu... 163 2e-38
AA466212, AA466212 vg86g02.r1 Barstead mouse pooled organs MP... 68 8e-10
AA423476, AA423476 ve76d07.r1 Soares mouse mammary gland NbMM... 60 2e-07
AA597213, AA597213 vo28a05.r1 Barstead mouse irradiated colon... 40 0.19
AA396266, AA396266 vb45c01.r1 Soares mouse lymph node NbMLN M... 40 0.19
AA967806, AA967806 uh05d06.r1 Soares mouse hypothalamus NMHy ... 38 0.75
AA591111, AA591111 vm12c06.r1 Knowles Solter mouse blastocyst... 38 0.75
W65797, W65797 me14g02.r1 Soares mouse embryo NbME13.5 14.5 M... 38 0.75
AA153891, AA153891 mq56e05.r1 Soares 2NbMT Mus musculus cDNA ... 38 0.75

AI019772, AI019772 ua90h02.r1 Soares mouse mammary gland NbMM... 36 3.0
 AA472253, AA472253 vh10g05.r1 Soares mouse mammary gland NbMM... 36 3.0
 AA230895, AA230895 mw14g07.r1 Soares mouse 3NME12.5 Mus muscu... 36 3.0
 W18052, W18052 mb83g03.r1 Soares mouse p3NMF19.5 Mus musculus... 36 3.0
 AA797681, AA797681 vx66c12.r1 Stratagene mouse skin (#937313)... 36 3.0
 W66734, W66734 me26g05.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.0
 AA968020, AA968020 uh07g01.r1 Soares mouse hypothalamus NMHy ... 36 3.0
 AA051644, AA051644 mj55d12.r1 Soares mouse embryo NbME13.5 14... 36 3.0
 AA162797, AA162797 mr29g09.r1 Soares mouse 3NbMS Mus musculus... 36 3.0
 AA549644, AA549644 vk80f08.s1 Knowles Solter mouse 2 cell Mus... 36 3.0
 AA273295, AA273295 vc01e01.r1 Soares mouse lymph node NbMLN M... 36 3.0
 AA048480, AA048480 mj33d08.r1 Soares mouse embryo NbME13.5 14... 36 3.0
 AA098207, AA098207 mn83d01.r1 Stratagene mouse Tcell 937311 M... 36 3.0
 AA027381, AA027381 mi05c06.r1 Soares mouse placenta 4NbMP13.5... 36 3.0
 AA544474, AA544474 vk33h06.r1 Soares mouse mammary gland NbMM... 36 3.0
 AA416466, AA416466 vd15c09.s1 Knowles Solter mouse 2 cell Mus... 36 3.0
 AA285999, AA285999 vb88h08.r1 Soares mouse 3NbMS Mus musculus... 36 3.0
 AA175025, AA175025 ms85f06.r1 Soares mouse 3NbMS Mus musculus... 36 3.0
 AA544386, AA544386 vk33f06.r1 Soares mouse mammary gland NbMM... 36 3.0
 AA175557, AA175557 ms96g04.r1 Soares mouse 3NbMS Mus musculus... 36 3.0
 AA711924, AA711924 vu59f09.r1 Soares mouse mammary gland NbMM... 36 3.0
 AA734052, AA734052 vv22c10.r1 Stratagene mouse heart (#937316... 36 3.0
 W53738, W53738 md12a12.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.0
 AA611837, AA611837 vo82a06.r1 Barstead mouse myotubes MPLRB5 ... 36 3.0
 AA879531, AA879531 vv96f06.r1 Soares mouse mammary gland NbMM... 36 3.0
 AA288625, AA288625 vb23g09.r1 Soares mouse 3NbMS Mus musculus... 36 3.0

AA784124, AA784124 d2b06a1.f1 Aspergillus nidulans 24hr asexu... 38 0.67
 AI044911, AI044911 UI-R-C1-kk-e-05-0-UI.s1 UI-R-C1 Rattus nor... 36 2.6
 AA550452, AA550452 1605m3 gmbPfHB3.1, G. Roman Reddy Plasmodi... 36 2.6
 F20017, ATTS6056 A. thaliana transcribed sequence; clone TAP... 36 2.6
 AA786697, AA786697 k5d01a1.f1 Aspergillus nidulans 24hr asexu... 36 2.6
 AA433457, AA433457 SW3ICA2345SK Brugia malayi infective larva... 36 2.6

SEQ ID NO:550

U66201, MMU66201 Mus musculus fibroblast growth factor homolo... 42 0.20
 AF020738, AF020738 Mus musculus fibroblast growth factor-rela... 42 0.20
 U66197, HSU66197 Human fibroblast growth factor homologous fa... 42 0.20
 Z46966, MMIMOGN44 M.musculus mRNA for imogen 44. 40 0.80

AC004301, AC004301 Drosophila melanogaster DNA sequence (P1 D... 40 0.80
U86662, LEU86662 Lycopersicon esculentum VPS41 (tVPS41) mRNA,... 40 0.80
Y14330, HSY14330 Homo sapiens partial mRNA for jagged2 protein 38 3.2
AF003521, AF003521 Homo sapiens Jagged 2 mRNA, complete cds 38 3.2
AF029778, AF029778 Homo sapiens Jagged2 (JAG2) mRNA, complete... 38 3.2
AF020201, AF020201 Homo sapiens Jagged 2 mRNA, complete cds 38 3.2
Z71523, SCYNL247W S.cerevisiae chromosome XIV reading frame ... 38 3.2
AF029779, AF029779 Homo sapiens hJAG2.del-E6 (JAG2) mRNA, alt... 38 3.2
U70049, RNU70049 Rattus norvegicus jagged2 precursor gene, pa... 38 3.2
X96722, SCCHXIVL S.cerevisiae DNA region from chromosome XIV... 38 3.2
AF005938, AF005938 Cavia porcellus L-type voltage-dependent c... 38 3.2
X78972, SBSTRBF S.bluensis ISP 5564 genes strB and strF 38 3.2
X94912, HSPR22 H.sapiens Pr22 gene 38 3.2

HUMAN ESTs

AA860926, AA860926 ak22d06.s1 Soares testis NHT Homo sapiens ... 650 0.0
AA348243, AA348243 EST54707 Hippocampus I Homo sapiens cDNA 5... 513 e-144
AA551799, AA551799 nk04a11.s1 NCI_CGAP_Co2 Homo sapiens cDNA ... 363 2e-98
AA327309, AA327309 EST30621 Colon I Homo sapiens cDNA 5' end 353 2e-95
AA344913, AA344913 EST50856 Gall bladder II Homo sapiens cDNA... 337 1e-90
AA121174, AA121174 zl88g08.s1 Stratagene colon (#937204) Homo... 317 1e-84
AA121198, AA121198 zl88g08.r1 Stratagene colon (#937204) Homo... 317 1e-84
AA001561, AA001561 ze46e07.s1 Soares retina N2b4HR Homo sapie... 42 0.098
AI005204, AI005204 ou60c12.x1 NCI_CGAP_Br2 Homo sapiens cDNA ... 40 0.39
AA757360, AA757360 ah98a01.s1 Soares NFL T GBC S1 Homo sapien... 40 0.39
AI005324, AI005324 ou13h07.x1 Soares_NFL_T_GBC_S1 Homo sapien... 40 0.39
AA416559, AA416559 zu18c03.r1 Soares NhHMPu S1 Homo sapiens c... 40 0.39
AA262162, AA262162 zs25b12.r1 NCI_CGAP_GCB1 Homo sapiens cDNA... 40 0.39
AA824270, AA824270 aj29f01.s1 Soares testis NHT Homo sapiens ... 40 0.39
AA826741, AA826741 85f12.s1 NCI_CGAP_Pr24 Homo sapiens cDNA... 40 0.39
AA813115, AA813115 aj44d06.s1 Soares testis NHT Homo sapiens ... 40 0.39
AA403143, AA403143 zv66d01.r1 Soares total fetus Nb2HF8 9w Ho... 40 0.39
AA725024, AA725024 ah97h10.s1 Soares NFL T GBC S1 Homo sapien... 40 0.39
AA804907, AA804907 oa89a01.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 40 0.39
AA628544, AA628544 af27h12.s1 Soares total fetus Nb2HF8 9w Ho... 40 0.39
AA618498, AA618498 np30a11.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 40 0.39
AA503727, AA503727 ne49g02.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 40 0.39
AA460961, AA460961 zx63b07.s1 Soares total fetus Nb2HF8 9w Ho... 40 0.39
AA770473, AA770473 ah89h06.s1 Soares NFL T GBC S1 Homo sapien... 40 0.39
AA759377, AA759377 ah54a10.s1 Soares testis NHT Homo sapiens ... 40 0.39
AA629243, AA629243 zu77e03.s1 Soares testis NHT Homo sapiens ... 40 0.39
AA903406, AA903406 ok62c11.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 40 0.39
AA215903, AA215903 hp0042.seq.F Fetal heart, Lambda ZAP Expre... 40 0.39

AA160827, AA160827 zo62e01.s1 Stratagene pancreas (#937208) H... 40 0.39
 AA577174, AA577174 nm86e11.s1 NCI_CGAP_Co9 Homo sapiens cDNA ... 40 0.39
 AA969632, AA969632 op38h05.s1 Soares_NFL_T_GBC_S1 Homo sapien... 40 0.39
 N72025, N72025 yz96g02.s1 Homo sapiens cDNA clone 290930 3'. 40 0.39
 AA974988, AA974988 on59b06.s1 Soares_NFL_T_GBC_S1 Homo sapien... 40 0.39
 W32428, W32428 zc05c12.s1 Soares parathyroid tumor NbHPA Homo... 40 0.39
 N21678, N21678 yx63g01.s1 Soares melanocyte 2NbHM Homo sapien... 40 0.39
 AA860208, AA860208 ak48c10.s1 Soares testis NHT Homo sapiens ... 40 0.39
 AA814296, AA814296 nz07d08.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 40 0.39
 AA806381, AA806381 oc22g05.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 40 0.39
 AA435587, AA435587 zt85d07.s1 Soares testis NHT Homo sapiens ... 40 0.39
 W45005, W45005 zc05c12.r1 Soares parathyroid tumor NbHPA Homo... 40 0.39
 AA393904, AA393904 zt85e06.r1 Soares testis NHT Homo sapiens ... 40 0.39
 AA759038, AA759038 ah75h11.s1 Soares testis NHT Homo sapiens ... 40 0.39
 AA927863, AA927863 om18a08.s1 Soares_NFL_T_GBC_S1 Homo sapien... 40 0.39
 AA461270, AA461270 zx63b07.r1 Soares total fetus Nb2HF8 9w Ho... 40 0.39
 AA417295, AA417295 zu18c03.s1 Soares NhHMPu S1 Homo sapiens c... 40 0.39
 W47466, W47466 zc34h02.r1 Soares senescent fibroblasts NbHSF ... 40 0.39
 AA262229, AA262229 zs25b12.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 40 0.39
 AA587486, AA587486 nn84e09.s1 NCI_CGAP_Br2 Homo sapiens cDNA ... 40 0.39
 AA401079, AA401079 zv66d01.s1 Soares total fetus Nb2HF8 9w Ho... 40 0.39
 AA872272, AA872272 oh72a11.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 40 0.39
 W47341, W47341 zc34h02.s1 Soares senescent fibroblasts NbHSF ... 40 0.39
 N72024, N72024 yz96g01.s1 Homo sapiens cDNA clone 290928 3'. 40 0.39
 N35076, N35076 yy19b08.s1 Homo sapiens cDNA clone 271671 3'. 40 0.39
 AI040354, AI040354 oy33d12.x1 Soares_parathyroid_tumor_NbHPA ... 40 0.39
 AA946650, AA946650 oq38h09.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 40 0.39
 AA022495, AA022495 ze70e04.s1 Soares fetal heart NbHH19W Homo... 40 0.39
 AA873216, AA873216 oh70f04.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 40 0.39
 R82551, R82551 yj19d06.r1 Homo sapiens cDNA clone 149195 5'. 38 1.5
 H30248, H30248 yp42a01.s1 Homo sapiens cDNA clone 190056 3'. 38 1.5
 AA161105, AA161105 zo58c05.s1 Stratagene pancreas (#937208) H... 38 1.5
 AA948291, AA948291 oq34d02.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 38 1.5
 AA416734, AA416734 zu08c01.s1 Soares testis NHT Homo sapiens ... 38 1.5
 AA431486, AA431486 zw72g01.s1 Soares testis NHT Homo sapiens ... 38 1.5
 AA416815, AA416815 zu08c01.r1 Soares testis NHT Homo sapiens ... 38 1.5

AA616807, AA616807 vn68c05.r1 Barstead mouse irradiated colon... 180 6e-44
 AA467482, AA467482 ve01a10.r1 Soares mouse NbMH Mus musculus ... 40 0.14
 AA543280, AA543280 vj80h05.r1 Soares mouse mammary gland NbMM... 40 0.14
 AA009071, AA009071 mg87b11.r1 Soares mouse embryo NbME13.5 14... 40 0.14
 AA106439, AA106439 ml59a08.r1 Stratagene mouse testis (#93730... 40 0.14

AA014768, AA014768 mi66h04.r1 Soares mouse embryo NbME13.5 14... 40 0.14
·AA881111, AA881111 vz06e09.r1 Soares mouse mammary gland NbMM... 40 0.14
AA049011, AA049011 mj48c09.r1 Soares mouse embryo NbME13.5 14... 40 0.14
AA185487, AA185487 mt62c07.r1 Soares 2NbMT Mus musculus cDNA ... 40 0.14
AA763419, AA763419 vw54a12.r1 Soares mouse mammary gland NMLM... 40 0.14
AA016868, AA016868 mh36e12.r1 Soares mouse placenta 4NbMP13.5... 40 0.14
AA833479, AA833479 uc91c03.r1 Soares mouse uterus NMPu Mus mu... 40 0.14
AA790448, AA790448 vw04f09.r1 Soares mouse mammary gland NbMM... 40 0.14
AA711859, AA711859 vu59c10.r1 Soares mouse mammary gland NbMM... 40 0.14
AA469884, AA469884 vf71g10.r1 Barstead mouse pooled organs MP... 40 0.14
AA230758, AA230758 my32g10.r1 Barstead mouse pooled organs MP... 40 0.14
AA497479, AA497479 vh29b12.r1 Soares mouse mammary gland NbMM... 40 0.14
AA138067, AA138067 mq37c11.r1 Barstead MPLRB1 Mus musculus cD... 40 0.14
AA103139, AA103139 mo17f05.r1 Life Tech mouse embryo 13 5dpc ... 40 0.14
AI047077, AI047077 uh61g06.r1 Soares mouse embryonic stem cel... 40 0.14
AI048515, AI048515 uh61e08.r1 Soares mouse embryonic stem cel... 40 0.14
W61547, W61547 md57a02.r1 Soares mouse embryo NbME13.5 14.5 M... 40 0.14
AA007762, AA007762 mg76b03.r1 Soares mouse embryo NbME13.5 14... 40 0.14
AA000268, AA000268 mg32e09.r1 Soares mouse embryo NbME13.5 14... 40 0.14
AA475425, AA475425 vh20g09.r1 Soares mouse mammary gland NbMM... 40 0.14
AA014223, AA014223 mh20a03.r1 Soares mouse placenta 4NbMP13.5... 40 0.14
AA797372, AA797372 vw27b08.r1 Soares mouse mammary gland NbMM... 40 0.14
AA106301, AA106301 ml81a09.r1 Stratagene mouse kidney (#93731... 40 0.14
AA033481, AA033481 mi42b07.r1 Soares mouse embryo NbME13.5 14... 40 0.14
W77724, W77724 me84h06.r1 Soares mouse embryo NbME13.5 14.5 M... 40 0.14
W83172, W83172 mf09a06.r1 Soares mouse p3NMF19.5 Mus musculus... 40 0.14
AA038869, AA038869 mi95b10.r1 Soares mouse p3NMF19.5 Mus musc... 40 0.14
AA068686, AA068686 mm59a03.r1 Stratagene mouse embryonic carc... 38 0.55
AA111190, AA111190 mp66b11.r1 Soares 2NbMT Mus musculus cDNA ... 36 2.2
AA840087, AA840087 uc99h12.r1 Soares mouse uterus NMPu Mus mu... 36 2.2
AA239210, AA239210 mx89e02.r1 Soares mouse NML Mus musculus c... 36 2.2
AA824205, AA824205 vy20g08.r1 Stratagene mouse macrophage (#9... 36 2.2
C87249, C87249 Mus musculus fertilized egg cDNA 3'-end seque... 36 2.2
AA089210, AA089210 mo05d10.r1 Stratagene mouse lung 937302 Mu... 36 2.2
AA711873, AA711873 vu28e06.r1 Barstead mouse myotubes MPLRB5 ... 36 2.2
AA793845, AA793845 vr35e12.r1 Barstead mouse myotubes MPLRB5 ... 36 2.2
AA645119, AA645119 vs72d03.r1 Stratagene mouse skin (#937313)... 36 2.2
AA967316, AA967316 vj47a03.r1 Stratagene mouse skin (#937313)... 36 2.2
W87202, W87202 mf55g08.r1 Soares mouse embryo NbME13.5 14.5 M... 36 2.2
AA218431, AA218431 my07e05.r1 Barstead mouse lung MPLRB2 Mus ... 36 2.2
AA796056, AA796056 vo65d01.r1 Soares mouse mammary gland NbMM... 36 2.2
AA542324, AA542324 vk53e07.r1 Stratagene mouse Tcell 937311 M... 36 2.2
AA530735, AA530735 vj32g11.r1 Stratagene mouse diaphragm (#93... 36 2.2
AI047609, AI047609 uh63g07.r1 Soares mouse embryonic stem cel... 36 2.2
AA591243, AA591243 vm18c04.r1 Knowles Solter mouse blastocyst... 36 2.2

AA856298, AA856298 vw99b01.r1 Soares 2NbMT Mus musculus cDNA ... 36 2.2
 AA966976, AA966976 ua38f11.r1 Soares mouse mammary gland NbMM... 36 2.2

AA957268, AA957268 UI-R-E1-fq-e-06-0-UI.s1 UI-R-E1 Rattus nor... 42 0.031
 AA801145, AA801145 EST190642 Normalized rat ovary, Bento Soar... 38 0.48
 AI012760, AI012760 EST207211 Normalized rat placenta, Bento S... 38 0.48
 AA874930, AA874930 UI-R-E0-ci-b-05-0-UI.s1 UI-R-E0 Rattus nor... 38 0.48
 C82607, C82607 Oryctolagus cuniculus corneal endothelial cDN... 38 0.48
 AA859865, AA859865 UI-R-E0-cc-b-04-0-UI.s1 UI-R-E0 Rattus nor... 38 0.48
 C83463, C83463 Oryctolagus cuniculus corneal endothelial cDN... 38 0.48
 AA801144, AA801144 EST190641 Normalized rat ovary, Bento Soar... 38 0.48
 AA859448, AA859448 UI-R-A0-bf-b-01-0-UI.s1 UI-R-A0 Rattus nor... 38 0.48
 AI009631, AI009631 EST204082 Normalized rat lung, Bento Soare... 38 0.48
 AI009035, AI009035 EST203486 Normalized rat embryo, Bento Soa... 38 0.48
 AA859542, AA859542 UI-R-E0-br-d-03-0-UI.s1 UI-R-E0 Rattus nor... 38 0.48
 H32878, H32878 EST108396 Rat PC-12 cells, untreated Rattus sp... 36 1.9
 AA943364, AA943364 EST198863 Normalized rat brain, Bento Soar... 36 1.9
 Z32602, ATTS2730 A. thaliana transcribed sequence; clone PAP... 36 1.9
 Z33974, ATTS3035 A. thaliana transcribed sequence; clone PAP... 36 1.9
 Z32603, ATTS2731 A. thaliana transcribed sequence; clone PAP... 36 1.9
 AA660859, AA660859 00754 MtRHE Medicago truncatula cDNA 5' si... 36 1.9
 AA842765, AA842765 M-EST080 Sugarcane mature stalk Saccharum ... 36 1.9
 AA125602, AA125602 JM00M011.QM3 Miracidia Sjc 3/96 Schistosom... 36 1.9
 AA785775, AA785775 h4b05a1.fl Aspergillus nidulans 24hr asexu... 36 1.9

SEQ ID NO:551

U66201, MMU66201 Mus musculus fibroblast growth factor homolo... 42 0.36
 AF020738, AF020738 Mus musculus fibroblast growth factor-rela... 42 0.36
 U66197, HSU66197 Human fibroblast growth factor homologous fa... 42 0.36
 U86662, LEU86662 Lycopersicon esculentum VPS41 (tVPS41) mRNA,... 40 1.4
 U85773, HSU85773 Human phosphomannomutase (PMM2) mRNA, comple... 40 1.4
 Z46966, MMIMOGN44 M.musculus mRNA for imogen 44. 40 1.4
 AC004301, AC004301 Drosophila melanogaster DNA sequence (P1 D... 40 1.4

HUMAN ESTs

W22160, W22160 63A6 Human retina cDNA Tsp509I-cleaved sublibr... 791 0.0
 AA860926, AA860926 ak22d06.s1 Soares testis NHT Homo sapiens ... 650 0.0

AA348243, AA348243 EST54707 Hippocampus I Homo sapiens cDNA 5... 513 e-143
AA551799, AA551799 nk04a11.s1 NCI_CGAP_Co2 Homo sapiens cDNA ... 363 4e-98
AA327309, AA327309 EST30621 Colon I Homo sapiens cDNA 5' end 353 4e-95
AA344913, AA344913 EST50856 Gall bladder II Homo sapiens cDNA... 337 2e-90
AA121174, AA121174 zl88g08.s1 Stratagene colon (#937204) Homo... 317 2e-84
AA121198, AA121198 zl88g08.r1 Stratagene colon (#937204) Homo... 317 2e-84
AA001561, AA001561 ze46e07.s1 Soares retina N2b4HR Homo sapie... 42 0.17
AA877455, AA877455 ob33g01.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 40 0.68
N35888, N35888 yy28b05.s1 Homo sapiens cDNA clone 272529 3'. 40 0.68
AA040802, AA040802 zf07g05.s1 Soares fetal heart NbHH19W Homo... 40 0.68
AA573297, AA573297 nk98d09.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 40 0.68
AA041240, AA041240 zf07g05.r1 Soares fetal heart NbHH19W Homo... 40 0.68
AA514777, AA514777 ni24b01.s1 NCI_CGAP_Co4 Homo sapiens cDNA ... 40 0.68
R02514, R02514 ye70b08.r1 Homo sapiens cDNA clone 123063 5'. 40 0.68
AA039536, AA039536 zk39h10.s1 Soares pregnant uterus NbHPU Ho... 40 0.68
AA888147, AA888147 04h11.s1 NCI_CGAP_Co10 Homo sapiens cDNA... 40 0.68
AA172158, AA172158 zp29a01.s1 Stratagene neuroepithelium (#93... 40 0.68
AA416734, AA416734 zu08c01.s1 Soares testis NHT Homo sapiens ... 38 2.7
N98472, N98472 yy65a04.r1 Homo sapiens cDNA clone 278382 5'. 38 2.7
AA416815, AA416815 zu08c01.r1 Soares testis NHT Homo sapiens ... 38 2.7
AA852281, AA852281 NHTBCae11g05r1 Normal Human Trabecular Bon... 38 2.7
AA948291, AA948291 oq34d02.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 38 2.7
R14449, R14449 yf81h09.r1 Homo sapiens cDNA clone 29034 5'. 38 2.7
AA431486, AA431486 zw72g01.s1 Soares testis NHT Homo sapiens ... 38 2.7

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AA469884, AA469884 vf71g10.r1 Barstead mouse pooled organs MP... 40 0.24
AA038869, AA038869 mi95b10.r1 Soares mouse p3NMF19.5 Mus musc... 40 0.24
AA185487, AA185487 mt62c07.r1 Soares 2NbMT Mus musculus cDNA ... 40 0.24
AA230758, AA230758 my32g10.r1 Barstead mouse pooled organs MP... 40 0.24
AA276740, AA276740 vc42a12.r1 Soares mouse 3NbMS Mus musculus... 40 0.24
AA763419, AA763419 vw54a12.r1 Soares mouse mammary gland NMLM... 40 0.24
AA106439, AA106439 ml59a08.r1 Stratagene mouse testis (#93730... 40 0.24
AA250010, AA250010 mz59b12.r1 Soares mouse lymph node NbMLN M... 38 0.97
AA068686, AA068686 mm59a03.r1 Stratagene mouse embryonic carc... 38 0.97
AA139459, AA139459 mq86a03.r1 Stratagene mouse melanoma (#937... 38 0.97
AA881111, AA881111 vz06e09.r1 Soares mouse mammary gland NbMM... 36 3.8
AA692425, AA692425 vt59b05.r1 Barstead mouse irradiated colon... 36 3.8
AA049011, AA049011 mj48c09.r1 Soares mouse embryo NbME13.5 14... 36 3.8
AA966976, AA966976 ua38f11.r1 Soares mouse mammary gland NbMM... 36 3.8
AI047077, AI047077 uh61g06.r1 Soares mouse embryonic stem cel... 36 3.8
AA103139, AA103139 mo17f05.r1 Life Tech mouse embryo 13 5dpc ... 36 3.8

AA840087, AA840087 uc99h12.r1 Soares mouse uterus NMPu Mus mu... 36 3.8
AA543280, AA543280 vj80h05.r1 Soares mouse mammary gland NbMM... 36 3.8
AA007762, AA007762 mg76b03.r1 Soares mouse embryo NbME13.5 14... 36 3.8
AA014223, AA014223 mh20a03.r1 Soares mouse placenta 4NbMP13.5... 36 3.8
AA591243, AA591243 vm18c04.r1 Knowles Solter mouse blastocyst... 36 3.8
AA921560, AA921560 vy52c06.r1 Stratagene mouse lung 937302 Mu... 36 3.8
W20935, W20935 mb96c07.r1 Soares mouse p3NMF19.5 Mus musculus... 36 3.8
AA793845, AA793845 vr35e12.r1 Barstead mouse myotubes MPLRB5 ... 36 3.8
AA856298, AA856298 vw99b01.r1 Soares 2NbMT Mus musculus cDNA ... 36 3.8
AA833479, AA833479 uc91c03.r1 Soares mouse uterus NMPu Mus mu... 36 3.8
AA218431, AA218431 my07e05.r1 Barstead mouse lung MPLRB2 Mus ... 36 3.8
AA089210, AA089210 mo05d10.r1 Stratagene mouse lung 937302 Mu... 36 3.8
AI047609, AI047609 uh63g07.r1 Soares mouse embryonic stem cel... 36 3.8
AA797372, AA797372 vw27b08.r1 Soares mouse mammary gland NbMM... 36 3.8
AA138067, AA138067 mq37c11.r1 Barstead MPLRB1 Mus musculus cD... 36 3.8
W83172, W83172 mf09a06.r1 Soares mouse p3NMF19.5 Mus musculus... 36 3.8
AA542324, AA542324 vk53e07.r1 Stratagene mouse Tcell 937311 M... 36 3.8
AA967316, AA967316 vj47a03.r1 Stratagene mouse skin (#937313)... 36 3.8
AI035925, AI035925 ub49e05.r1 Soares mouse mammary gland NbMM... 36 3.8
AA497479, AA497479 vh29b12.r1 Soares mouse mammary gland NbMM... 36 3.8
W87202, W87202 mf55g08.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.8
AA016868, AA016868 mh36e12.r1 Soares mouse placenta 4NbMP13.5... 36 3.8
AA467482, AA467482 ve01a10.r1 Soares mouse NbMH Mus musculus ... 36 3.8
AA014768, AA014768 mi66h04.r1 Soares mouse embryo NbME13.5 14... 36 3.8
AA711859, AA711859 vu59c10.r1 Soares mouse mammary gland NbMM... 36 3.8
AA530735, AA530735 vj32g11.r1 Stratagene mouse diaphragm (#93... 36 3.8
AA009071, AA009071 mg87b11.r1 Soares mouse embryo NbME13.5 14... 36 3.8
AA711873, AA711873 vu28e06.r1 Barstead mouse myotubes MPLRB5 ... 36 3.8
AA645119, AA645119 vs72d03.r1 Stratagene mouse skin (#937313)... 36 3.8
AA106301, AA106301 ml81a09.r1 Stratagene mouse kidney (#93731... 36 3.8
AA111190, AA111190 mp66b11.r1 Soares 2NbMT Mus musculus cDNA ... 36 3.8
C87249, C87249 Mus musculus fertilized egg cDNA 3'-end seque... 36 3.8
AA796056, AA796056 vo65d01.r1 Soares mouse mammary gland NbMM... 36 3.8
AA230661, AA230661 mw15f08.r1 Soares mouse 3NME12.5 Mus muscu... 36 3.8
AA033481, AA033481 mi42b07.r1 Soares mouse embryo NbME13.5 14... 36 3.8
AA000268, AA000268 mg32e09.r1 Soares mouse embryo NbME13.5 14... 36 3.8
AI048515, AI048515 uh61e08.r1 Soares mouse embryonic stem cel... 36 3.8
W61547, W61547 md57a02.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.8
AA790448, AA790448 vw04f09.r1 Soares mouse mammary gland NbMM... 36 3.8
AA824205, AA824205 vy20g08.r1 Stratagene mouse macrophage (#9... 36 3.8
AA475425, AA475425 vh20g09.r1 Soares mouse mammary gland NbMM... 36 3.8
W62989, W62989 md88h12.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.8
W77724, W77724 me84h06.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.8
AA239210, AA239210 mx89e02.r1 Soares mouse NML Mus musculus c... 36 3.8

AA957268, AA957268 UI-R-E1-fq-e-06-0-UI.s1 UI-R-E1 Rattus nor... 42 0.055
 AA891284, AA891284 EST195087 Normalized rat heart, Bento Soar... 40 0.22
 Z83055, RNZ83055 R.norvegicus mRNA; expressed sequence tag; ... 40 0.22
 AI010967, AI010967 EST205418 Normalized rat muscle, Bento Soa... 40 0.22
 AA852049, AA852049 EST194818 Normalized rat spleen, Bento Soa... 40 0.22
 H33489, H33489 EST109542 Rat PC-12 cells, NGF-treated (9 days... 40 0.22
 AA799616, AA799616 EST189113 Normalized rat heart, Bento Soar... 40 0.22
 Z83044, RNZ83044 R.norvegicus mRNA; expressed sequence tag; ... 40 0.22
 AA660819, AA660819 00713 MtRHE Medicago truncatula cDNA 5' 38 0.86
 AA956139, AA956139 UI-R-E1-fi-h-08-0-UI.s1 UI-R-E1 Rattus nor... 38 0.86
 T00613, T00613 wEST01334 Caenorhabditis elegans cDNA clone CE... 38 0.86
 AA785775, AA785775 h4b05a1.f1 Aspergillus nidulans 24hr asexu... 36 3.4
 AA660859, AA660859 00754 MtRHE Medicago truncatula cDNA 5' si... 36 3.4
 AA943364, AA943364 EST198863 Normalized rat brain, Bento Soar... 36 3.4
 C68472, C68472 C.elegans cDNA clone yk305a12 : 5' end, singl... 36 3.4
 AA800635, AA800635 EST190132 Normalized rat lung, Bento Soare... 36 3.4
 Z32602, ATTS2730 A. thaliana transcribed sequence; clone PAP... 36 3.4
 Z32603, ATTS2731 A. thaliana transcribed sequence; clone PAP... 36 3.4
 AA842765, AA842765 M-EST080 Sugarcane mature stalk Saccharum ... 36 3.4
 AA955567, AA955567 UI-R-E1-fa-a-08-0-UI.s1 UI-R-E1 Rattus nor... 36 3.4
 H32878, H32878 EST108396 Rat PC-12 cells, untreated Rattus sp... 36 3.4
 Z33974, ATTS3035 A. thaliana transcribed sequence; clone PAP... 36 3.4
 D45997, RICS10346A Rice cDNA, partial sequence (S10346_1A). 36 3.4
 AA125602, AA125602 JM00M011.QM3 Miracidia Sjc 3/96 Schistosom... 36 3.4
 AA800634, AA800634 EST190131 Normalized rat lung, Bento Soare... 36 3.4
 D46069, RICS10475A Rice cDNA, partial sequence (S10475_1A). 36 3.4

SEQ ID NO:552

U66201, MMU66201 Mus musculus fibroblast growth factor homolo... 42 0.38
 AF020738, AF020738 Mus musculus fibroblast growth factor-rela... 42 0.38
 U66197, HSU66197 Human fibroblast growth factor homologous fa... 42 0.38
 Z46966, MMIMOGN44 M.musculus mRNA for imogen 44. 40 1.5
 U86662, LEU86662 Lycopersicon esculentum VPS41 (tVPS41) mRNA.... 40 1.5
 U85773, HSU85773 Human phosphomannomutase (PMM2) mRNA, comple... 40 1.5

HUMAN ESTs

W22160, W22160 63A6 Human retina cDNA Tsp509I-cleaved sublibr... 791 0.0
 AA860926, AA860926 ak22d06.s1 Soares testis NHT Homo sapiens ... 650 0.0

AA348243, AA348243 EST54707 Hippocampus I Homo sapiens cDNA 5... 513 e-143
 AA551799, AA551799 nk04a11.s1 NCI_CGAP_Co2 Homo sapiens cDNA ... 363 4e-98
 AA327309, AA327309 EST30621 Colon I Homo sapiens cDNA 5' end 353 4e-95
 AA344913, AA344913 EST50856 Gall bladder II Homo sapiens cDNA... 337 2e-90
 AA121198, AA121198 zl88g08.r1 Stratagene colon (#937204) Homo... 317 2e-84
 AA121174, AA121174 zl88g08.s1 Stratagene colon (#937204) Homo... 317 2e-84
 AA001561, AA001561 ze46e07.s1 Soares retina N2b4HR Homo sapie... 42 0.18
 AA172158, AA172158 zp29a01.s1 Stratagene neuroepithelium (#93... 40 0.72
 N35888, N35888 yy28b05.s1 Homo sapiens cDNA clone 272529 3'. 40 0.72
 AA877455, AA877455 ob33g01.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 40 0.72
 AA573297, AA573297 nk98d09.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 40 0.72
 AA040802, AA040802 zf07g05.s1 Soares fetal heart NbHH19W Homo... 40 0.72
 R02514, R02514 ye70b08.r1 Homo sapiens cDNA clone 123063 5'. 40 0.72
 AA514777, AA514777 ni24b01.s1 NCI_CGAP_Co4 Homo sapiens cDNA ... 40 0.72
 AA041240, AA041240 zf07g05.r1 Soares fetal heart NbHH19W Homo... 40 0.72
 AA888147, AA888147 04h11.s1 NCI_CGAP_Co10 Homo sapiens cDNA... 40 0.72
 AA039536, AA039536 zk39h10.s1 Soares pregnant uterus NbHPU Ho... 40 0.72
 AA416734, AA416734 zu08c01.s1 Soares testis NHT Homo sapiens ... 38 2.8
 N25839, N25839 yx22e05.r1 Homo sapiens cDNA clone 262496 5'. 38 2.8
 AA431486, AA431486 zw72g01.s1 Soares testis NHT Homo sapiens ... 38 2.8
 N98472, N98472 yy65a04.r1 Homo sapiens cDNA clone 278382 5'. 38 2.8
 AA416815, AA416815 zu08c01.r1 Soares testis NHT Homo sapiens ... 38 2.8
 AA852281, AA852281 NHTBCae11g05r1 Normal Human Trabecular Bon... 38 2.8
 AA948291, AA948291 oq34d02.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 38 2.8

AA616807, AA616807 vn68c05.r1 Barstead mouse irradiated colon... 180 1e-43
 AA185487, AA185487 mt62c07.r1 Soares 2NbMT Mus musculus cDNA ... 40 0.26
 AA276740, AA276740 vc42a12.r1 Soares mouse 3NbMS Mus musculus... 40 0.26
 AA469884, AA469884 vf71g10.r1 Barstead mouse pooled organs MP... 40 0.26
 AA230758, AA230758 my32g10.r1 Barstead mouse pooled organs MP... 40 0.26
 AA038869, AA038869 mi95b10.r1 Soares mouse p3NMF19.5 Mus musc... 40 0.26
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 AA763419, AA763419 vw54a12.r1 Soares mouse mammary gland NMLM... 40 0.26
 AA139459, AA139459 mq86a03.r1 Stratagene mouse melanoma (#937... 38 1.0
 AA068686, AA068686 mm59a03.r1 Stratagene mouse embryonic carc... 38 1.0
 AA218431, AA218431 my07e05.r1 Barstead mouse lung MPLRB2 Mus ... 36 4.0
 AI047077, AI047077 uh61g06.r1 Soares mouse embryonic stem cel... 36 4.0
 C87249, C87249 Mus musculus fertilized egg cDNA 3'-end seque... 36 4.0
 AI035925, AI035925 ub49e05.r1 Soares mouse mammary gland NbMM... 36 4.0
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 AA645119, AA645119 vs72d03.r1 Stratagene mouse skin (#937313)... 36 4.0
 AA530735, AA530735 vj32g11.r1 Stratagene mouse diaphragm (#93... 36 4.0

AA000268, AA000268 mg32e09.r1 Soares mouse embryo NbME13.5 14... 36 4.0
AA793845, AA793845 vr35e12.r1 Barstead mouse myotubes MPLRB5 ... 36 4.0
AA840087, AA840087 uc99h12.r1 Soares mouse uterus NMPu Mus mu... 36 4.0
AA711873, AA711873 vu28e06.r1 Barstead mouse myotubes MPLRB5 ... 36 4.0
AA790448, AA790448 vw04f09.r1 Soares mouse mammary gland NbMM... 36 4.0
AA106301, AA106301 ml81a09.r1 Stratagene mouse kidney (#93731... 36 4.0
AA543280, AA543280 vj80h05.r1 Soares mouse mammary gland NbMM... 36 4.0
AA007762, AA007762 mg76b03.r1 Soares mouse embryo NbME13.5 14... 36 4.0
AA921560, AA921560 vy52c06.r1 Stratagene mouse lung 937302 Mu... 36 4.0
AA692425, AA692425 vt59b05.r1 Barstead mouse irradiated colon... 36 4.0
AA833479, AA833479 uc91c03.r1 Soares mouse uterus NMPu Mus mu... 36 4.0
AA824205, AA824205 vy20g08.r1 Stratagene mouse macrophage (#9... 36 4.0
AA033481, AA033481 mi42b07.r1 Soares mouse embryo NbME13.5 14... 36 4.0
W61547, W61547 md57a02.r1 Soares mouse embryo NbME13.5 14.5 M... 36 4.0
AA796056, AA796056 vo65d01.r1 Soares mouse mammary gland NbMM... 36 4.0
AA467482, AA467482 ve01a10.r1 Soares mouse NbMH Mus musculus ... 36 4.0
AA239210, AA239210 mx89e02.r1 Soares mouse NML Mus musculus c... 36 4.0
AA881111, AA881111 vz06e09.r1 Soares mouse mammary gland NbMM... 36 4.0
AA542324, AA542324 vk53e07.r1 Stratagene mouse Tcell 937311 M... 36 4.0
AA089210, AA089210 mo05d10.r1 Stratagene mouse lung 937302 Mu... 36 4.0
W77724, W77724 me84h06.r1 Soares mouse embryo NbME13.5 14.5 M... 36 4.0
AI048515, AI048515 uh61e08.r1 Soares mouse embryonic stem cel... 36 4.0
AA009071, AA009071 mg87b11.r1 Soares mouse embryo NbME13.5 14... 36 4.0
AA475425, AA475425 vh20g09.r1 Soares mouse mammary gland NbMM... 36 4.0
AA230661, AA230661 mw15f08.r1 Soares mouse 3NME12.5 Mus muscu... 36 4.0
AA138067, AA138067 mq37c11.r1 Barstead MPLRB1 Mus musculus cD... 36 4.0
W83172, W83172 mf09a06.r1 Soares mouse p3NMF19.5 Mus musculus... 36 4.0
AA797372, AA797372 vv27b08.r1 Soares mouse mammary gland NbMM... 36 4.0
AA711859, AA711859 vu59c10.r1 Soares mouse mammary gland NbMM... 36 4.0
AA967316, AA967316 vj47a03.r1 Stratagene mouse skin (#937313)... 36 4.0
W87202, W87202 mf55g08.r1 Soares mouse embryo NbME13.5 14.5 M... 36 4.0
AA103139, AA103139 mo17f05.r1 Life Tech mouse embryo 13.5dpc ... 36 4.0
AA014223, AA014223 mh20a03.r1 Soares mouse placenta 4NbMP13.5... 36 4.0
W62989, W62989 md88h12.r1 Soares mouse embryo NbME13.5 14.5 M... 36 4.0
W20935, W20935 mb96c07.r1 Soares mouse p3NMF19.5 Mus musculus... 36 4.0
AA966976, AA966976 ua38f11.r1 Soares mouse mammary gland NbMM... 36 4.0
AA856298, AA856298 vw99b01.r1 Soares mouse 2NbMT Mus musculus cDNA ... 36 4.0
AA014768, AA014768 mi66h04.r1 Soares mouse embryo NbME13.5 14... 36 4.0
AA497479, AA497479 vh29b12.r1 Soares mouse mammary gland NbMM... 36 4.0
AA049011, AA049011 mj48c09.r1 Soares mouse embryo NbME13.5 14... 36 4.0
AA016868, AA016868 mh36e12.r1 Soares mouse placenta 4NbMP13.5... 36 4.0
AI047609, AI047609 uh63g07.r1 Soares mouse embryonic stem cel... 36 4.0
AA591243, AA591243 vm18c04.r1 Knowles Solter mouse blastocyst... 36 4.0

AA957268, AA957268 UI-R-E1-fq-e-06-0-UI.s1 UI-R-E1 Rattus nor... 42 0.058
 T00613, T00613 wEST01334 Caenorhabditis elegans cDNA clone CE... 38 0.90
 AA956139, AA956139 UI-R-E1-fi-h-08-0-UI.s1 UI-R-E1 Rattus nor... 38 0.90
 AA660819, AA660819 00713 MtRHE Medicago truncatula cDNA 5' 38 0.90
 AA125602, AA125602 JM00M011.QM3 Miracidia Sjc 3/96 Schistosom... 36 3.6
 Z33974, ATTS3035 A. thaliana transcribed sequence; clone PAP... 36 3.6
 C68472, C68472 C.elegans cDNA clone yk305a12 : 5' end, singl... 36 3.6
 AA785775, AA785775 h4b05a1.f1 Aspergillus nidulans 24hr asexu... 36 3.6
 Z32602, ATTS2730 A. thaliana transcribed sequence; clone PAP... 36 3.6
 AA943364, AA943364 EST198863 Normalized rat brain, Bento Soar... 36 3.6
 Z32603, ATTS2731 A. thaliana transcribed sequence; clone PAP... 36 3.6
 AA842765, AA842765 M-EST080 Sugarcane mature stalk Saccharum ... 36 3.6
 D45997, RICS10346A Rice cDNA, partial sequence (S10346_1A). 36 3.6
 AA955567, AA955567 UI-R-E1-fa-a-08-0-UI.s1 UI-R-E1 Rattus nor... 36 3.6
 AA800634, AA800634 EST190131 Normalized rat lung, Bento Soare... 36 3.6
 AA660859, AA660859 00754 MtRHE Medicago truncatula cDNA 5' si... 36 3.6
 AA800635, AA800635 EST190132 Normalized rat lung, Bento Soare... 36 3.6
 D46069, RICS10475A Rice cDNA, partial sequence (S10475_1A). 36 3.6
 H32878, H32878 EST108396 Rat PC-12 cells, untreated Rattus sp... 36 3.6

SEQ ID NO:553

Z99297, HS262D12 Homo sapiens DNA sequence from PAC 262D12 o... 1963 0.0
 Z81540, CEF46B3 Caenorhabditis elegans cosmid F46B3, complet... 40 0.89
 U67488, U67488 Methanococcus jannaschii section 30 of 150 of ... 38 3.5
 AE000786, AE000786 Borrelia burgdorferi plasmid lp28-2, compl... 38 3.5
 L02053, OMMGSHTR1 Ommastrephes sloani glutathione transferase... 38 3.5
 AC004521, ATAC004521 Arabidopsis thaliana chromosome II BAC F... 38 3.5
 L41250, DROGPDH Drosophila nebulosa glycerol-3-phosphate deh... 38 3.5
 AE000619, HPAE000619 Helicobacter pylori section 97 of 134 of... 38 3.5
 U39720, Mycoplasma genitalium ackA, licA, mucB, rpL10, rpL32... 38 3.5
 AC004533, HUAC004533 Homo sapiens Chromosome 16 BAC clone CIT... 38 3.5
 U62292, HSU62292 Human elastin (ELN) gene, partial cds 38 3.5

HUMAN ESTs

W02630, W02630 za52c02.r1 Soares fetal liver spleen INFLS Hom... 1009 0.0
 AA557183, AA557183 nl74f12.s1 NCI_CGAP_Br2 Homo sapiens cDNA ... 874 0.0
 AA761171, AA761171 nz09e11.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 866 0.0
 AA976975, AA976975 oq26g11.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 854 0.0
 AA449515, AA449515 zx06b11.r1 Soares total fetus Nb2HF8 9w Ho... 848 0.0

AA678392, AA678392 zi26h10.s1 Soares fetal liver spleen 1NFLS... 848 0.0
AA909198, AA909198 ol12d06.s1 Soares_NFL_T_GBC_S1 Homo sapien... 831 0.0
W79208, W79208 zd79g05.r1 Soares fetal heart NbHH19W Homo sap... 813 0.0
W03125, W03125 za53c02.r1 Soares fetal liver spleen 1NFLS Hom... 807 0.0
W94750, W94750 ze13h08.r1 Soares fetal heart NbHH19W Homo sap.. 785 0.0
AA354894, AA354894 EST63217 Jurkat T-cells V Homo sapiens cDN... 771 0.0
H70075, H70075 yr92b03.r1 Homo sapiens cDNA clone 212717 5'. 745 0.0
W77859, W77859 zd70b08.r1 Soares fetal heart NbHH19W Homo sap... 728 0.0
AA425424, AA425424 zw48f03.s1 Soares total fetus Nb2HF8 9w Ho... 718 0.0
AA476893, AA476893 zu29f09.r1 Soares ovary tumor NbHOT Homo s... 688 0.0
AA456676, AA456676 aa01h02.s1 Soares NhHMPu S1 Homo sapiens c... 688 0.0
AA662309, AA662309 nu97c11.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 668 0.0
W72135, W72135 zd70b08.s1 Soares fetal heart NbHH19W Homo sap... 650 0.0
N74362, N74362 za52c02.s1 Homo sapiens cDNA clone 296162 3'. 622 e-176
N66917, N66917 za47d09.s1 Homo sapiens cDNA clone 295697 3'. 585 e-165
AA251287, AA251287 zs04c06.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 583 e-164
AA971082, AA971082 op70h01.s1 Soares_NFL_T_GBC_S1 Homo sapien... 567 e-160
W78165, W78165 zd79g05.s1 Soares fetal heart NbHH19W Homo sap... 565 e-159
AA253290, AA253290 zr71g03.r1 Soares NhHMPu S1 Homo sapiens c... 559 e-157
AA729063, AA729063 nw22f08.s1 NCI_CGAP_GCB0 Homo sapiens cDNA... 557 e-157
AA987313, AA987313 or81h06.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ... 553 e-155
AA300954, AA300954 EST13832 Testis tumor Homo sapiens cDNA 5'... 541 e-152
AA425594, AA425594 zw48f03.r1 Soares total fetus Nb2HF8 9w Ho... 529 e-148
N24014, N24014 yx87g10.s1 Homo sapiens cDNA clone 268770 3'. 523 e-146
AA947355, AA947355 od86e12.s1 NCI_CGAP_Ov2 Homo sapiens cDNA ... 504 e-140
AA121074, AA121074 zl88b06.s1 Stratagene colon (#937204) Homo... 460 e-127
AA742964, AA742964 ny15d01.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 454 e-126
AA306814, AA306814 EST177885 Colon carcinoma (HCC) cell line ... 452 e-125
W87699, W87699 zh65b11.r1 Soares fetal liver spleen 1NFLS S1 ... 446 e-123
W87700, W87700 zh65b11.s1 Soares fetal liver spleen 1NFLS S1 ... 438 e-121
AA449084, AA449084 zx06b11.s1 Soares total fetus Nb2HF8 9w Ho... 398 e-109
N99231, N99231 zb76f11.s1 Soares senescent fibroblasts NbHSF ... 391 e-106
N49900, N49900 yv24d04.s1 Homo sapiens cDNA clone 243655 3'. 383 e-104
AA782911, AA782911 ai62a10.s1 Soares testis NHT Homo sapiens ... 365 6e-99
AA936553, AA936553 on23g11.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ... 361 9e-98
N74414, N74414 za53c02.s1 Homo sapiens cDNA clone 296258 3'. 353 2e-95
AA834628, AA834628 od98a10.s1 NCI_CGAP_Ov2 Homo sapiens cDNA ... 341 8e-92
AA693756, AA693756 zi55f11.s1 Soares fetal liver spleen 1NFLS... 341 8e-92
AA909616, AA909616 ol09d06.s1 Soares_NFL_T_GBC_S1 Homo sapien... 341 8e-92
H69662, H69662 yr92b03.s1 Homo sapiens cDNA clone 212717 3'. 321 8e-86
AA249558, AA249558 jj7521.seq.F Human fetal heart, Lambda ZAP... 317 1e-84
AA911960, AA911960 oh88g08.s1 NCI_CGAP_Co8 Homo sapiens cDNA ... 317 1e-84
AA969099, AA969099 op55e06.s1 Soares_NFL_T_GBC_S1 Homo sapien... 303 2e-80
AA766191, AA766191 oa12g08.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 212 5e-53
AA689312, AA689312 nx05e10.s1 NCI_CGAP_GC3 Homo sapiens cDNA ... 200 2e-49

AA418586, AA418586 zv93e05.r1 Soares NhHMPu S1 Homo sapiens c... 182 5e-44
 AA418570, AA418570 zv93e05.s1 Soares NhHMPu S1 Homo sapiens c... 182 5e-44
 AA534939, AA534939 nf82f03.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 167 3e-39
 AA888430, AA888430 nw74e05.s1 NCI_CGAP_Pr12 Homo sapiens cDNA... 167 3e-39
 N50003, N50003 yv24d04.r1 Homo sapiens cDNA clone 243655 5' s... 149 6e-34
 AA535102, AA535102 nf84f06.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 135 1e-29
 AA262335, AA262335 zr71g03.s1 Soares NhHMPu S1 Homo sapiens c... 129 6e-28
 AA766681, AA766681 oa34c05.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 105 9e-21
 AA761492, AA761492 nz27a05.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 101 1e-19
 AA688350, AA688350 nv15a05.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 90 5e-16
 AA347041, AA347041 EST53285 Fetal heart II Homo sapiens cDNA ... 76 8e-12
 T94395, T94395 ye35e02.s1 Homo sapiens cDNA clone 119738 3'. 46 0.007
 AA833565, AA833565 aj46a02.s1 Soares testis NHT Homo sapiens ... 46 0.007
 AA095460, AA095460 l4630.seq.F Fetal heart, Lambda ZAP Express... 40 0.43
 AA904415, AA904415 ok07e06.s1 Soares_NFL_T_GBC_S1 Homo sapien... 40 0.43
 AI018800, AI018800 ov32h04.x1 Soares_testis_NHT Homo sapiens ... 38 1.7
 AA631083, AA631083 nq77e07.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 1.7

AA399772, AA399772 vd70g05.r1 Beddington mouse embryonic regi... 347 5e-94
 AA467106, AA467106 vd98b04.r1 Soares mouse NbMH Mus musculus ... 309 1e-82
 AI046844, AI046844 uh55c11.r1 Soares mouse embryonic stem cel... 208 3e-52
 AA475075, AA475075 vh11g05.r1 Soares mouse mammary gland NbMM... 194 4e-48
 AA646094, AA646094 vs31e06.r1 Stratagene mouse Tcell 937311 M... 186 1e-45
 AA390020, AA390020 vb30e07.r1 Soares mouse lymph node NbMLN M... 170 6e-41
 AA245553, AA245553 my52g04.r1 Barstead mouse pooled organs MP... 170 6e-41
 AA930741, AA930741 vs57b02.r1 Stratagene mouse skin (#937313)... 155 4e-36
 W62610, W62610 md58c06.r1 Soares mouse embryo NbME13.5 14.5 M... 117 8e-25
 AA239270, AA239270 my40e01.r1 Barstead mouse pooled organs MP... 109 2e-22
 AA015148, AA015148 mh16e01.r1 Soares mouse placenta 4NbMP13.5... 54 1e-05
 AA764095, AA764095 vw09h02.r1 Soares 2NbMT Mus musculus cDNA ... 38 0.61
 AA238570, AA238570 my35h02.r1 Barstead mouse pooled organs MP... 38 0.61
 AA600576, AA600576 vm75f08.r1 Knowles Solter mouse blastocyst... 38 0.61
 AA636273, AA636273 vq76a10.s1 Knowles Solter mouse 2 cell Mus... 36 2.4
 AA051407, AA051407 mj41f08.r1 Soares mouse embryo NbME13.5 14... 36 2.4
 AA823136, AA823136 vw41b03.r1 Soares mouse mammary gland NbMM... 36 2.4
 W83831, W83831 mf26a06.r1 Soares mouse embryo NbME13.5 14.5 M... 36 2.4
 D77944, MUSC0D06 Mouse embryonal carcinoma F9 cell cDNA, C0D06 36 2.4
 AA915408, AA915408 vz29h04.r1 Soares 2NbMT Mus musculus cDNA ... 36 2.4
 AI047229, AI047229 uh63a09.r1 Soares mouse embryonic stem cel... 36 2.4
 AA271880, AA271880 va73d01.r1 Soares mouse 3NME12 5 Mus muscu... 36 2.4
 AA475165, AA475165 vg95f01.r1 Barstead mouse pooled organs MP... 36 2.4
 AA619774, AA619774 vl58a05.s1 Knowles Solter mouse 2 cell Mus... 36 2.4

AA673116, AA673116 vn49g11.r1 Barstead mouse myotubes MPLRB5 ... 36 2.4
 AA870623, AA870623 vq24a07.r1 Barstead stromal cell line MPLR... 36 2.4
 W58907, W58907 md52f12.r1 Soares mouse embryo NbME13.5 14.5 M... 36 2.4
 AA690593, AA690593 vu53d05.r1 Soares mouse mammary gland NbMM... 36 2.4
 AA754801, AA754801 vu21f03.r1 Barstead mouse myotubes MPLRB5 ... 36 2.4
 AA271607, AA271607 va72a12.r1 Soares mouse 3NME12.5 Mus muscu... 36 2.4
 AA064256, AA064256 mj66a03.r1 Soares mouse p3NMF19.5 Mus musc... 36 2.4
 AA475144, AA475144 vg95d01.r1 Barstead mouse pooled organs MP... 36 2.4
 AA197736, AA197736 mv02g08.r1 Guay Woodford Beier mouse kidney... 36 2.4

AA817944, AA817944 UI-R-A0-ag-e-01-0-UI.s1 UI-R-A0 Rattus nor... 40 0.14
 F14714, SSC8B01 S.scrofa mRNA; expressed sequence tag (5'; c... 38 0.54
 H91505, H91505 SWMFCA089SK Brugia malayi microfilaria cDNA (S... 36 2.1
 AA998610, AA998610 UI-R-C0-if-c-04-0-UI.s1 UI-R-C0 Rattus nor... 36 2.1
 AA893562, AA893562 EST197365 Normalized rat liver, Bento Soar... 36 2.1
 AI008397, AI008397 EST202848 Normalized rat embryo, Bento Soa... 36 2.1

SEQ ID NO:554

Z92544, HS313D11 Human DNA sequence from cosmid 313D11 from ... 700 0.0
 Z46940, HSPRMTNP2 H.sapiens PRM1 gene, PRM2 gene and TNP2 gene 44 0.048
 U85039, TMU85039 Theileria mutans 32 kDa immunodominant pirop... 42 0.19
 U85251, TMU85251 Theileria mutans 32 kDa immunodominant pirop... 42 0.19
 AF003630, AF003630 Theileria mutans clone 15, 32 kDa immunodo... 42 0.19
 AF003629, AF003629 Theileria mutans clone 9, 32 kDa immunodom... 42 0.19
 AB007884, AB007884 Homo sapiens KIAA0424 mRNA, partial cds 42 0.19
 U85040, TMU85040 Theileria mutans 32 kDa immunodominant pirop... 42 0.19
 Z97343, ATFCA8 Arabidopsis thaliana DNA chromosome 4, ESSA I... 40 0.75
 L19655, TOSRNA1X Tomato ringspot virus polyprotein (RNA-1) ge... 40 0.75
 M73822, TOSRNA1A Tomato ringspot virus RNA1 gene, 5' end. 40 0.75
 L02543, BOVMTNNT Bos taurus nicotinamide nucleotide transhydr... 40 0.75
 J03534, BOVNAD Bovine mitochondrial nicotinamide nucleotide t... 40 0.75
 M62862, TRBRTE Trypanosoma cruzi retrotransposon encoding gag... 40 0.75
 X72711, MMREPCFC M.musculus mRNA for replication factor C, I... 38 3.0
 M88489, MUSNBP Mus musculus nonamer binding protein mRNA, com... 38 3.0
 U36441, MMU36441 Mus musculus differentiation specific elemen... 38 3.0
 AB002354, AB002354 Human mRNA for KIAA0356 gene, complete cds 38 3.0
 J03149, CATFMSC Cat (F.domesticus) c-fms proto-oncogene mRNA ... 38 3.0
 J05475, CHKVICOLL Chicken type VI collagen alpha 2 (VI) subun... 38 3.0

AF038163, AF038163 Homo sapiens interleukin-15 (IL-15) gene, ... 38 3.0
 X75917, HSFBMBF H.sapiens mRNA for fetal beta-MHC binding fa... 38 3.0
 X06542, DMHSPG3 Drosophila heat shock gene 3 from 67B locus 38 3.0
 D17315, DRODAGK Fruit fly mRNA for diacylglycerol kinase, co... 38 3.0
 Z58600, HS45E3F H.sapiens CpG DNA, clone 45e3, forward read ... 38 3.0
 D78638, D78638 Xenopus laevis mRNA for DNA (cytosine-5)-met... 38 3.0
 Z49204, MMNADPTRH M.musculus mRNA for NADP transhydrogenase. 38 3.0
 L10425, BPEMETC Bordetella avium beta-cystathionase-lyase (me... 38 3.0
 U01222, U01222 Mus musculus activator 1 large subunit (A1-p14... 38 3.0
 U15037, MMU15037 Mus musculus replication factor C large subu... 38 3.0
 K01643, FCSSMONC Feline sarcoma virus (McDonough strain) tran... 38 3.0
 Z57538, HS183C6F H.sapiens CpG DNA, clone 183c6, forward rea... 38 3.0
 U07157, MMU07157 Mus musculus ISRE-binding protein (IBF-1) mR... 38 3.0
 Z64961, HS183F7R H.sapiens CpG DNA, clone 183f7, reverse rea... 38 3.0

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SEQ ID NO:555

AF039693, AF039693 Homo sapiens unknown protein mRNA, complet... 916 0.0
 S51239, S51239 calreticulin [Aplysia californica=marine snail... 48 0.005
 Z74035, CEF47G9 Caenorhabditis elegans cosmid F47G9, complet... 46 0.019
 AF022814, AF022814 Fugu rubripes transcription factor (SLP-1)... 44 0.073
 X82638, CSCYTOX C.sordelii cytotoxin gene 42 0.29
 U63063, SCU63063 Saccharomyces cerevisiae something about sil... 42 0.29
 X63501, SCRPG53 S.cerevisiae RPC53 gene for RNA polymerase C... 42 0.29
 U67572, U67572 Methanococcus jannaschii section 114 of 150 of... 42 0.29
 Z74201, SCYDL153C S.cerevisiae chromosome IV reading frame O... 42 0.29
 U66032, MTU66032 Methanosaerina thermophila CO dehydrogenase/... 42 0.29
 Z95620, SPBC3D6 S.pombe chromosome II cosmid c3D6 42 0.29
 X97751, SCIV23 S.cerevisiae chrIV genes STE7, CLB3, MSH5, RP... 42 0.29
 X65541, ATCAN A.thaliana mRNA for carbonic anhydrase 42 0.29
 L14750, ATHCARANHY Arabidopsis thaliana carbonic anhydrase ge... 42 0.29
 U00995, U00995 Rattus norvegicus TA1 mRNA, complete cds. 40 1.1
 S73876, S73876 FPR3=FKBP-70 [Saccharomyces cerevisiae, Genomi... 40 1.1
 U12825, SCU12825 Saccharomyces cerevisiae transcription facto... 40 1.1
 Z74237, SCYDL189W S.cerevisiae chromosome IV reading frame O... 40 1.1
 U76906, REU76906 Rhizobium etli FixK (fixK), FixN (fixN), mon... 40 1.1

- AF050157, MMHC135G15 *Mus musculus* major histocompatibility lo... 40 1.1
 X58857, SCPPH22 *S.cerevisiae* PPH22 gene for protein phosphat... 40 1.1
 X79379, SCPROIS *S.cerevisiae* gene for proline isomerase 40 1.1
 Z68341, CEF01G4 *Caenorhabditis elegans* cosmid F01G4, complet... 40 1.1
 M17192, MUSHOX1 *Mouse* homeodomain protein (Hox1.1) mRNA, comp... 40 1.1
 U50307, CELF43H9 *Caenorhabditis elegans* cosmid F43H9. 40 1.1
 S73144, S73144 bone sialoprotein [cattle, fetal bone cells, m... 40 1.1
 L34569, YSCFPR3A *Saccharomyces cerevisiae* (clone pBYNG1) prol... 40 1.1
 D78303, D78303 *Rattus norvegicus* YT521 mRNA for RNA splicing... 40 1.1
 X83276, SCDNAIV *S.cerevisiae* DNA for ORFs from chromosome IV 40 1.1
 U54558, HSU54558 Human translation initiation factor eIF3 p66... 40 1.1
 Z50109, CEC09H10 *Caenorhabditis elegans* cosmid C09H10, compl... 40 1.1
 X56983, EAVATP1 *E.arvense* gene for catalytic 70kDa V-ATPase ... 40 1.1
 AB011125, AB011125 *Homo sapiens* mRNA for KIAA0553 protein, p... 40 1.1
 Z46373, SC8248 *S.cerevisiae* chromosome XIII cosmid 8248 40 1.1
 AF039042, CELZK697 *Caenorhabditis elegans* cosmid ZK697 40 1.1
 Z28028, SCYKL028W *S.cerevisiae* chromosome XI reading frame O... 40 1.1
 AC005266, AC005266 *Homo sapiens* chromosome 19, cosmid F23465,... 38 4.5
 U60822, HSU60822 Human dystrophin (DMD) gene, exons 7, 8 and ... 38 4.5
 AJ003141, HVAJ3141 *Hordeum vulgare* mRNA for stress-related p... 38 4.5
 M26250, CRAGAP43 Goldfish (*C.auratus*) growth-associated prote... 38 4.5
 X95267, GGRYR3 *G.gallus* mRNA for ryanodine receptor type 3 38 4.5
 L37092, MUSCDPK *Mus musculus* cyclin-dependent kinase homologu... 38 4.5
 Z72507, CEF17C11 *Caenorhabditis elegans* cosmid F17C11, compl... 38 4.5
 U29608, DMU29608 *Drosophila melanogaster* large tumor suppress... 38 4.5
 Z49072, CET24A11 *Caenorhabditis elegans* cosmid T24A11, compl... 38 4.5
 M83142, RATBGASTR *Rattus norvegicus* beta-galactoside-alpha 2... 38 4.5
 Z20656, HSCAMHCA *Homo sapiens* of cardiac alpha-myosin heavy ... 38 4.5
 M82937, YSACS2A *Candida albicans* chitin synthase 2 (CHS2) gen... 38 4.5
 U28888, MMU28888 *Mus musculus* neurogenic differentiation fact... 38 4.5
 S66408, S66408 c-erbB=proto-oncogene {exon 1, promoter} [chic... 38 4.5
 AC002396, AC002396 *Arabidopsis thaliana* chromosome I BAC F3I6... 38 4.5
 AE000665, MMAE000665 *Mus musculus* TCR beta locus from bases 5... 38 4.5
 L39837, DROWARTS *Drosophila melanogaster* tumor suppressor (war... 38 4.5
 AG000377, AG000377 *Homo sapiens* genomic DNA, 21q region, clo... 38 4.5
 X05632, HSMHCAG1 Human alpha-MHC gene for myosin heavy chain... 38 4.5
 AC002108, AC002108 Genomic sequence from Mouse 4, complete se... 38 4.5
 U37219, HSU37219 Human cyclophilin-like protein CyP-60 mRNA, ... 38 4.5
 M58633, MUSP58GTA *Mouse* p58/GTA protein kinase mRNA, complete... 38 4.5
 M25162, HUMMYHC08 Human cardiac alpha-myosin heavy chain (MYH... 38 4.5
 Z46259, SCRPD3COS *S.cerevisiae* FY1676 RPD3 gene. 38 4.5
 U09558, LJU09558 *Lactobacillus johnsonii* ATCC 11506 insertion... 38 4.5
 U66160, MMUSC104 *Mus musculus* extracellular matrix associated... 38 4.5
 Z73126, SCYLL021W *S.cerevisiae* chromosome XII reading frame ... 38 4.5
 U83981, HSU83981 *Homo sapiens* apoptosis associated protein (G... 38 4.5

U59897, MRU59897 *Macropus robustus hypoxanthine phosphoribosyltransferase* ... 38 4.5
 D38256, YSCSCT1 *Yeast gene for suppressor of ctr mutation* ... 38 4.5
 X69838, HSG9A *H.sapiens mRNA for G9a* ... 38 4.5
 X52952, RNCMOSO *Rat mRNA for c-mos* ... 38 4.5
 U37221, HSU37221 *Human cyclophilin-like protein mRNA, partial...* 38 4.5
 X65880, DPRH4OP1 *D.pseudoobscura rh4 opsin gene, exon 1* ... 38 4.5
 U58971, NTU58971 *Nicotiana tabacum calmodulin-binding protein* ... 38 4.5
 Z35773, SCYBL012C *S.cerevisiae chromosome II reading frame O...* 38 4.5
 X67668, MMHMG2 *M.musculus mRNA for high mobility group 2 pro...* 38 4.5
 L81727, HSL81727 *Homo sapiens (subclone 1_d5 from P1 H69) DNA* ... 38 4.5
 AL023800, HS833B2 *Human DNA sequence *** SEQUENCING IN PROGR...* 38 4.5
 X62438, HVPERO *H.vulgare mRNA for peroxidase* ... 38 4.5
 AC004096, AC004096 *Mouse Cosmid ma66a100 from 14D1-D2, comple...* 38 4.5
 AL008980, PFSC03050 *Plasmodium falciparum DNA *** SEQUENCING...* 38 4.5
 U64827, MMU64827 *Mus musculus extracellular matrix associated...* 38 4.5
 AC003010, HUAC003010 *Homo sapiens Chromosome 16 BAC clone CIT...* 38 4.5
 AE001002, AE001002 *Archaeoglobus fulgidus section 105 of 172 ...* 38 4.5
 U86662, LEU86662 *Lycopersicon esculentum VPS41 (tVPS41) mRNA,...* 38 4.5
 M20386, CHKEGFR *Chicken epidermal growth factor receptor (CER...* 38 4.5
 M77637, CHKEGF *Gallus gallus EGF/TGF-alpha receptor (c-erbB) ...* 38 4.5
 U08185, MMU08185 *Mus musculus BALB/c zinc-finger protein Blim...* 38 4.5
 AC004231, AC004231 *Homo sapiens chromosome 17, clone hRPC.111...* 38 4.5
 Z50100, HVC39SAT *H.vulgare GAA-satellite DNA* ... 38 4.5
 X53731, SCSPA2G *S. cerevisiae SPA2 gene* ... 38 4.5
 U37220, HSU37220 *Human cyclophilin-like protein mRNA, partial...* 38 4.5
 X97560, SC32KBF *S.cerevisiae 32kb DNA fragment of chromosome...* 38 4.5
 AB011479, AB011479 *Arabidopsis thaliana genomic DNA, chromos...* 38 4.5
 U89340, LVU89340 *Lytechinus variegatus Endo16 homolog (LvEndo1...* 38 4.5
 U73850, TCU73850 *Trypanosoma cruzi 29 kDa proteasome subunit ...* 38 4.5
 AB006698, AB006698 *Arabidopsis thaliana genomic DNA, chromos...* 38 4.5
 D37888, CYIMYC2 *Cyprinus carpio c-myc gene for c-Myc, comple...* 38 4.5
 AF017349, MMDSGIII *7 Mus musculus desmoglein 3 (Dsg3) gene, i...* 38 4.5
 X91807, OSTA136 *O.sativa mRNA for alpha-tubulin (clone OSTA-...* 38 4.5
 Z71587, SCYNL311C *S.cerevisiae chromosome XIV reading frame ...* 38 4.5
 AE000742, AE000742 *Aquifex aeolicus section 74 of 109 of the ...* 38 4.5

HUMAN ESTs

AA324311, AA324311 *EST27136 Cerebellum II Homo sapiens cDNA 5...* 593 e-167
 AA639190, AA639190 *ns04a01.r1 NCI_CGAP_Ew1 Homo sapiens cDNA ...* 513 e-143
 AA172199, AA172199 *zo96a06.r1 Stratagene ovarian cancer (#937... 505 e-141*
 AA588066, AA588066 *nk10d08.s1 NCI_CGAP_Co2 Homo sapiens cDNA ...* 502 e-140
 AA412036, AA412036 *zt68d09.s1 Soares testis NHT Homo sapiens ...* 502 e-140
 AA508745, AA508745 *ni23a03.s1 NCI_CGAP_Co4 Homo sapiens cDNA ...* 502 e-140

AA480337, AA480337 ne33a03.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 502 e-140
AA902270, AA902270 ok69e04.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 502 e-140
AA947303, AA947303 ok20d04.s1 Soares_NSF_F8_9W_OT_PA_P_S1 Hom... 502 e-140
R23642, R23642 yh35e03.r1 Homo sapiens cDNA clone 131740 5'. 490 e-136
AA811913, AA811913 ob51d06.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 464 e-128
AA172083, AA172083 zo96a06.s1 Stratagene ovarian cancer (#937... 464 e-128
AA725458, AA725458 ai16g01.s1 Soares parathyroid tumor NbHPA ... 400 e-109
R26558, R26558 yh35e02.s1 Homo sapiens cDNA clone 131738 3'. 359 5e-97
AA402403, AA402403 zt68d09.r1 Soares testis NHT Homo sapiens ... 315 6e-84
R58372, R58372 G3243 Fetal heart Homo sapiens cDNA clone G324... 262 8e-68
AA389703, AA389703 M421 Fetal heart, Lambda ZAP Express Homo ... 202 6e-50
W25749, W25749 11b4 Human retina cDNA randomly primed sublibr... 103 4e-20
W27158, W27158 22h9 Human retina cDNA randomly primed sublibr... 66 1e-08
T65784, T65784 yc11f10.s1 Homo sapiens cDNA clone 80395 3' si... 42 0.14
AA179601, AA179601 zp49f10.r1 Stratagene HeLa cell s3 937216 ... 42 0.14
AA928679, AA928679 on48e08.s1 NCI_CGAP_Co8 Homo sapiens cDNA ... 40 0.55
AA887972, AA887972 nq95g11.s1 NCI_CGAP_Co10 Homo sapiens cDNA... 40 0.55
W46946, W46946 zc40c05.s1 Soares senescent fibroblasts NbHSF ... 40 0.55
AA887862, AA887862 nq99b08.s1 NCI_CGAP_Co10 Homo sapiens cDNA... 40 0.55
AA554819, AA554819 ni34d08.s1 NCI_CGAP_Lu1 Homo sapiens cDNA ... 40 0.55
AA557362, AA557362 nl81d12.s1 NCI_CGAP_Br2 Homo sapiens cDNA ... 40 0.55
AA252258, AA252258 zr29e04.s1 Stratagene NT2 neuronal precurs... 40 0.55
N34310, N34310 yy52b10.s1 Homo sapiens cDNA clone 277147 3' s... 40 0.55
AA552228, AA552228 nk06b04.s1 NCI_CGAP_Co2 Homo sapiens cDNA ... 40 0.55
AI017648, AI017648 ou99b02.x1 NCI_CGAP_Kid3 Homo sapiens cDNA... 40 0.55
T17395, T17395 NIB846 Normalized infant brain, Bento Soares H... 40 0.55
AA219659, AA219659 zr05e10.s1 Stratagene NT2 neuronal precurs... 40 0.55
AA463841, AA463841 zx67f06.r1 Soares total fetus Nb2HF8 9w Ho... 40 0.55
N66817, N66817 za09b11.s1 Homo sapiens cDNA clone 292029 3' s... 40 0.55
AA167358, AA167358 zp06f12.s1 Stratagene ovarian cancer (#937... 40 0.55
AA063505, AA063505 zf70d02.r1 Soares pineal gland N3HPG Homo ... 40 0.55
AA731625, AA731625 nw64a04.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 40 0.55
AA100119, AA100119 zl80g04.s1 Stratagene colon (#937204) Homo... 40 0.55
AA181572, AA181572 zp51d04.s1 Stratagene HeLa cell s3 937216 ... 40 0.55
AA327182, AA327182 EST30459 Colon I Homo sapiens cDNA 5' end ... 40 0.55
R48608, R48608 yj65f07.s1 Homo sapiens cDNA clone 153637 3' s... 40 0.55
AA678485, AA678485 ah06e04.s1 Gessler Wilms tumor Homo sapien... 40 0.55
AA082353, AA082353 zn38c11.r1 Stratagene endothelial cell 937... 40 0.55
AA633213, AA633213 nq57c06.s1 NCI_CGAP_Co9 Homo sapiens cDNA ... 40 0.55
W38410, W38410 zc77g09.s1 Pancreatic Islet Homo sapiens cDNA ... 40 0.55
AA345893, AA345893 EST51967 Gall bladder I Homo sapiens cDNA ... 40 0.55
N26876, N26876 yx97f06.s1 Homo sapiens cDNA clone 269699 3' s... 40 0.55
N95279, N95279 zb60c09.s1 Soares fetal lung NbHL19W Homo sapi... 40 0.55
AI041637, AI041637 ox92h08.x1 Soares_senescent_fibroblasts_Nb... 40 0.55
N67830, N67830 za05d12.s1 Homo sapiens cDNA clone 291671 3' s... 40 0.55

AA535094, AA535094 nf84e06.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 40 0.55
 AA514414, AA514414 nf57d11.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 40 0.55
 T56802, T56802 ya71h07.s2 Homo sapiens cDNA clone 67165 3' co... 40 0.55
 N68147, N68147 yz55f12.s1 Homo sapiens cDNA clone 286991 3' s... 40 0.55
 AA535811, AA535811 nf93g10.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 40 0.55
 AA115591, AA115591 zl05g09.s1 Soares pregnant uterus NbHPU Ho... 40 0.55
 N75851, N75851 za96g11.s1 Homo sapiens cDNA clone 300452 3'. 40 0.55
 AA534433, AA534433 nf80a08.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 40 0.55
 H99778, H99778 yx36g01.s1 Homo sapiens cDNA clone 263856 3' s... 40 0.55
 AA970859, AA970859 oo81h03.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 40 0.55
 F02131, HSC0PF092 H. sapiens partial cDNA sequence; clone c.... 40 0.55
 AA810279, AA810279 od14g11.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 40 0.55
 AA595146, AA595146 nl84b01.s1 NCI_CGAP_Br2 Homo sapiens cDNA ... 40 0.55
 AA632386, AA632386 np67e06.s1 NCI_CGAP_Br2 Homo sapiens cDNA ... 40 0.55
 AA135124, AA135124 zo24c04.s1 Stratagene colon (#937204) Homo... 40 0.55
 AA143500, AA143500 zo31b10.s1 Stratagene colon (#937204) Homo... 40 0.55
 AA854992, AA854992 aj53g12.s1 Soares testis NHT Homo sapiens ... 40 0.55
 AA156872, AA156872 zl20h07.s1 Soares pregnant uterus NbHPU Ho... 40 0.55
 AA160994, AA160994 zq41c12.s1 Stratagene hNT neuron (#937233)... 40 0.55
 AA961724, AA961724 or60a10.s1 NCI_CGAP_GC3 Homo sapiens cDNA ... 40 0.55
 AA551210, AA551210 nj27e09.s1 NCI_CGAP_AA1 Homo sapiens cDNA ... 40 0.55
 R44103, R44103 yg27c10.s1 Homo sapiens cDNA clone 33636 3'. 40 0.55
 AA938086, AA938086 oj08h08.s1 NCI_CGAP_Mel3 Homo sapiens cDNA... 40 0.55
 AA576021, AA576021 nm57d11.s1 NCI_CGAP_Br3 Homo sapiens cDNA ... 40 0.55
 AA722725, AA722725 zg86b09.s1 Soares fetal heart NbHH19W Homo... 40 0.55
 AA678948, AA678948 ah08h11.s1 Gessler Wilms tumor Homo sapien... 40 0.55
 W07435, W07435 za96g11.r1 Soares fetal lung NbHL19W Homo sapi... 40 0.55
 T34639, T34639 EST72167 Homo sapiens cDNA 5' end similar to s... 40 0.55
 AA632245, AA632245 np67b09.s1 NCI_CGAP_Br2 Homo sapiens cDNA ... 40 0.55
 R98701, R98701 yr31f08.s1 Homo sapiens cDNA clone 206919 3'. 40 0.55
 R76418, R76418 yi58a10.s1 Homo sapiens cDNA clone 143418 3'. 40 0.55
 AI028447, AI028447 ow08b09.x1 Soares_parathyroid_tumor_NbHPA ... 40 0.55
 AI002929, AI002929 an15e12.s1 Gessler Wilms tumor Homo sapien... 40 0.55
 AA779388, AA779388 ae26a03.s1 Soares NbHFB Homo sapiens cDNA ... 40 0.55
 AA776220, AA776220 ah10f02.s1 Gessler Wilms tumor Homo sapien... 40 0.55
 AA815223, AA815223 oc05c04.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 40 0.55
 W60807, W60807 zd27b08.s1 Soares fetal heart NbHH19W Homo sap... 40 0.55
 AA666007, AA666007 ag71g01.s1 Gessler Wilms tumor Homo sapien... 40 0.55
 AA643849, AA643849 np26f07.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 40 0.55
 AA846740, AA846740 aj99b12.s1 Soares parathyroid tumor NbHPA ... 40 0.55
 AA598498, AA598498 ae38h01.s1 Gessler Wilms tumor Homo sapien... 40 0.55
 AA535972, AA535972 nf95a01.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 40 0.55
 AA488544, AA488544 ab37g06.r1 Stratagene HeLa cell s3 937216 ... 40 0.55
 AA866044, AA866044 oh52g07.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 40 0.55
 C14370, C14370 Human fetal brain cDNA 5'-end GEN-050F01 40 0.55

AA237204, AA237204 mx18d02.r1 Soares mouse NML Mus musculus c... 167 1e-39
AA563402, AA563402 vl75d08.r1 Knowles Solter mouse blastocyst... 38 0.78
AA413261, AA413261 ve52f04.r1 Beddington mouse embryonic regi... 38 0.78
AA097645, AA097645 mm36f09.r1 Stratagene mouse skin (#937313)... 38 0.78
AA122578, AA122578 mn25b08.r1 Beddington mouse embryonic regi... 38 0.78
AA122581, AA122581 mn25c08.r1 Beddington mouse embryonic regi... 38 0.78
AA646168, AA646168 vn11e06.r1 Stratagene mouse Tcell 937311 M... 36 3.1
AA200881, AA200881 mu03c09.r1 Soares mouse 3NbMS Mus musculus... 36 3.1
AI048938, AI048938 uc84h06.y1 Sugano mouse kidney mkia Mus mu... 36 3.1
AA217675, AA217675 mv01b09.r1 Soares mouse lymph node NbMLN M... 36 3.1
AI006387, AI006387 ua71d09.r1 Soares 2NbMT Mus musculus cDNA ... 36 3.1
AA162722, AA162722 mn42b07.r1 Beddington mouse embryonic regi... 36 3.1
AA207387, AA207387 mv89a11.r1 GuayWoodford Beier mouse kidney... 36 3.1
AA511382, AA511382 vg14b04.r1 Soares mouse NbMH Mus musculus ... 36 3.1
AA123112, AA123112 mn30g01.r1 Beddington mouse embryonic regi... 36 3.1
AA106683, AA106683 ml83h06.r1 Stratagene mouse kidney (#93731... 36 3.1
AA105882, AA105882 ml84h07.r1 Stratagene mouse kidney (#93731... 36 3.1
W12171, W12171 ma59a10.r1 Soares mouse p3NMF19.5 Mus musculus... 36 3.1
AA208446, AA208446 mv85e01.r1 GuayWoodford Beier mouse kidney... 36 3.1
AA451370, AA451370 vf84h02.r1 Soares mouse mammary gland NbMM... 36 3.1
AA244639, AA244639 mx02g12.r1 Soares mouse NML Mus musculus c... 36 3.1
AA267119, AA267119 mz74d07.r1 Soares mouse lymph node NbMLN M... 36 3.1
AA561847, AA561847 vl27a12.r1 Stratagene mouse Tcell 937311 M... 36 3.1
AA237313, AA237313 mx17b11.r1 Soares mouse NML Mus musculus c... 36 3.1
AA145817, AA145817 mq68a12.r1 Soares 2NbMT Mus musculus cDNA ... 36 3.1
AA052080, AA052080 mf69f12.r1 Soares mouse embryo NbME13.5 14... 36 3.1
AA000646, AA000646 mg23f09.r1 Soares mouse embryo NbME13.5 14... 36 3.1
AA510521, AA510521 vh59a05.r1 Soares mouse mammary gland NbMM... 36 3.1
AI006122, AI006122 ua86h01.r1 Soares mouse mammary gland NbMM... 36 3.1
AA987039, AA987039 uc74e05.x1 Sugano mouse liver mlia Mus mus... 36 3.1
W77413, W77413 me64d06.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.1
AA114809, AA114809 mn17e09.r1 Beddington mouse embryonic regi... 36 3.1
AA793564, AA793564 vn54c05.r1 Barstead mouse myotubes MPLRB5 ... 36 3.1
AA174537, AA174537 mt10f09.r1 Soares mouse 3NbMS Mus musculus... 36 3.1
W62181, W62181 md87d08.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.1
AA272905, AA272905 va39d01.r1 Soares mouse 3NME12.5 Mus muscu... 36 3.1
AA286005, AA286005 va30e05.r1 GuayWoodford Beier mouse kidney... 36 3.1
AA212823, AA212823 mw81c07.r1 Soares mouse NML Mus musculus c... 36 3.1
AA125061, AA125061 mq83d10.r1 Stratagene mouse melanoma (#937... 36 3.1

AA519228, AA519228 TgESTzz39h02.s1 TgME4⁹ invivo Bradyzoite c... 44 0.011

AA520185, AA520185 TgESTzz39d03.s1 TgME49 invivo Bradyzoite c... 44 0.011
 AA531917, AA531917 TgESTzz48f01.r1 TgME49 invivo Bradyzoite c... 44 0.011
 AA519997, AA519997 TgESTzz36h03.r1 TgME49 invivo Bradyzoite c... 44 0.011
 AA520811, AA520811 TgESTzz64d05.r1 TgME49 invivo Bradyzoite c... 44 0.011
 AA520866, AA520866 TgESTzz68e05.r1 TgME49 invivo Bradyzoite c... 44 0.011
 AA519844, AA519844 TgESTzz36c03.r1 TgME49 invivo Bradyzoite c... 44 0.011
 AA274295, AA274295 TgESTzz24c11.s1 TgME49 invivo Bradyzoite c... 44 0.011
 AA520901, AA520901 TgESTzz65a05.r1 TgME49 invivo Bradyzoite c... 44 0.011
 AA519829, AA519829 TgESTzz36a02.r1 TgME49 invivo Bradyzoite c... 44 0.011
 AA531839, AA531839 TgESTzz47h05.r1 TgME49 invivo Bradyzoite c... 44 0.011
 C70525, C70525 C.elegans cDNA clone yk409g6 : 5' end, singl... 44 0.011
 AA520235, AA520235 TgESTzz53c06.r1 TgME49 invivo Bradyzoite c... 42 0.044
 T42800, T42800 6063 Lambda-PRL2 Arabidopsis thaliana cDNA clo... 42 0.044
 R29976, R29976 12581 Lambda-PRL2 Arabidopsis thaliana cDNA cl... 42 0.044
 H32045, H32045 EST106774 Rat PC-12 cells, untreated Rattus sp... 40 0.18
 AA819924, AA819924 MF5MA171.AE3 S. mansoni female adult Lambd... 40 0.18
 H37128, H37128 15257 Lambda-PRL2 Arabidopsis thaliana cDNA cl... 40 0.18
 T04367, T04367 414 Lambda-PRL2 Arabidopsis thaliana cDNA clon... 40 0.18
 R90528, R90528 16883 Lambda-PRL2 Arabidopsis thaliana cDNA cl... 40 0.18
 AA660422, AA660422 00298 MtRHE Medicago truncatula cDNA 5' 40 0.18
 U94861, RRU94861 Rattus norvegicus clone HCY3 mRNA sequence 40 0.18
 F14275, ATTS5197 A. thaliana transcribed sequence; clone YBY... 38 0.69
 W43730, W43730 23107 CD4-16 Arabidopsis thaliana cDNA clone H... 38 0.69
 N65025, N65025 20065 Lambda-PRL2 Arabidopsis thaliana cDNA cl... 38 0.69
 AI001628, AI001628 EST0210 Tilapia brain cDNA library in pUC1... 38 0.69
 H74687, H74687 383 Brassica napus cDNA clone R25R. 38 0.69
 AA395597, AA395597 27394 Lambda-PRL2 Arabidopsis thaliana cDN... 38 0.69
 AA753070, AA753070 97AS2091 Rice Immature Seed Lambda ZAPII c... 38 0.69
 D41274, RICS3647A Rice cDNA, partial sequence (S3647_1A). 38 0.69
 Z25731, ATTS1208 A. thaliana transcribed sequence; clone VCV... 38 0.69
 N82780, N82780 TgESTzy34e03.r1 TgRH Tachyzoite cDNA Toxoplasm... 38 0.69
 AA597822, AA597822 29889 Lambda-PRL2 Arabidopsis thaliana cDN... 38 0.69
 AA948906, AA948906 LD27590.5prime LD Drosophila melanogaster ... 38 0.69
 AI013695, AI013695 EST208370 Normalized rat spleen, Bento Soa... 38 0.69
 AA753263, AA753263 96BS0294 Rice Immature Seed Lambda ZAPII c... 38 0.69
 F14402, ATTS5324 A. thaliana transcribed sequence; clone TAP... 36 2.7
 T46158, T46158 9421 Lambda-PRL2 Arabidopsis thaliana cDNA clo... 36 2.7
 C91400, C91400 Dictyostelium discoideum slug cDNA, clone SSK169 36 2.7
 T46009, T46009 9272 Lambda-PRL2 Arabidopsis thaliana cDNA clo... 36 2.7
 AA440655, AA440655 LD15510.5prime LD Drosophila melanogaster ... 36 2.7
 AA559374, AA559374 MU002092.NH3 York-Harrop-lung-A Schistosom... 36 2.7
 Z32623, ATTS2751 A. thaliana transcribed sequence; clone YAP... 36 2.7
 T43683, T43683 6946 Lambda-PRL2 Arabidopsis thaliana cDNA clo... 36 2.7
 AA263535, AA263535 LD06645.5prime LD Drosophila melanogaster ... 36 2.7
 C37095, C37095 C.elegans cDNA clone yk482c11 : 3' end. singl... 36 2.7

C57017, C57017 *C.elegans* cDNA clone yk308h9 : 3' end, single... 36 2.7
 C93857, C93857 *Dictyostelium discoideum* slug cDNA, clone SSL794 36 2.7
 C92242, C92242 *Dictyostelium discoideum* slug cDNA, clone SSD283 36 2.7
 Z33976, ATTS3037 *A. thaliana* transcribed sequence; clone YAP... 36 2.7
 R62091, R62091 EST351 *Strongylocentrotus purpuratus* cDNA 5' end. 36 2.7
 AA567455, AA567455 HL01288.5prime HL *Drosophila melanogaster* ... 36 2.7
 C74456, C74456 Rice cDNA, partial sequence (E31357_1A) 36 2.7
 AA753227, AA753227 97AS2316 Rice Immature Seed Lambda ZAPII c... 36 2.7
 C92456, C92456 *Dictyostelium discoideum* slug cDNA, clone SSE569 36 2.7
 T20458, T20458 2466 Lambda-PRL2 *Arabidopsis thaliana* cDNA clo... 36 2.7
 R29905, R29905 12510 Lambda-PRL2 *Arabidopsis thaliana* cDNA cl... 36 2.7
 M79841, M79841 wEST00378 *Caenorhabditis elegans* cDNA clone CE... 36 2.7
 Z17562, ATTS0136 *A. thaliana* transcribed sequence; clone TAT... 36 2.7
 D71983, CELK084H2R *C.elegans* cDNA clone yk84h2 : 3' end, sin... 36 2.7
 T20404, T20404 2412 Lambda-PRL2 *Arabidopsis thaliana* cDNA clo... 36 2.7
 AI012789, AI012789 EST207240 Normalized rat placenta, Bento S... 36 2.7
 U83048, BTU83048 *Bos taurus* clone 0429 mRNA sequence 36 2.7
 AA660182, AA660182 00022 *MtRHE Medicago truncatula* cDNA 5' si... 36 2.7
 D48514, RICS14740A Rice cDNA, partial sequence (S14740_1A). 36 2.7
 C90110, C90110 *Dictyostelium discoideum* slug cDNA, clone SSI103 36 2.7
 H36880, H36880 15009 Lambda-PRL2 *Arabidopsis thaliana* cDNA cl... 36 2.7
 AA699152, AA699152 HL07807.5prime HL *Drosophila melanogaster* ... 36 2.7
 C11922, C11922 *C.elegans* cDNA clone yk144a11 : 5' end, singl... 36 2.7
 AA816691, AA816691 LD03795.5prime LD *Drosophila melanogaster* ... 36 2.7

SEQ ID NO:556

X99668, MM22A3 *M.musculus* mRNA for exon from unknown gene 22A3 260 5e-67
 Z83760, CICOS41 *Ciona intestinalis* DNA sequence from cosmid ... 40 0.94
 Z75710, CED1081 *Caenorhabditis elegans* cosmid D1081, complet... 40 0.94
 U73628, HSU73628 Human chromosome 11 101h11 cosmid, complete ... 40 0.94
 X99757, DMDYDTRO *D.melanogaster* mRNA for dystrophin 38 3.7
 U51189, HIVU51189 HIV-1 clone 93th253 from Thailand, complete... 38 3.7
 AC004118, AC004118 *Drosophila melanogaster* (P1 DS06238 (D26))... 38 3.7
 U50313, CELF44C4 *Caenorhabditis elegans* cosmid F44C4. 38 3.7
 AC004503, AC004503 *Homo sapiens* chromosome 5, P1 clone 1354A7... 38 3.7
 M16840, WHTCPA2 Wheat Asp-tRNA gene. 38 3.7
 Y13381, RNAMPH1 *Rattus norvegicus* mRNA for amphiphysin, amph1 38 3.7
 AC002994, AC002994 *Homo sapiens* chromosome 17, clone HRPC987K... 38 3.7
 AB008271, AB008271 *Arabidopsis thaliana* genomic DNA, chromos... 38 3.7
 D49701, ASNNIAD *Aspergillus oryzae* niaD gene for nitrate red... 38 3.7

X59422, HSPLD1 H.sapiens Pl d1 repetitive DNA	38	3.7
Z98555, PFSC03027 Plasmodium falciparum DNA *** SEQUENCING I...	38	3.7

HUMAN ESTs

AA315671, AA315671 EST187451 Colon carcinoma (HCC) cell line ...	932	0.0
U56653, HSU56653 Human heat shock inducible mRNA	769	0.0
AA487685, AA487685 ab23b09.r1 Stratagene lung (#937210) Homo ...	751	0.0
AA044797, AA044797 zk67g12.r1 Soares pregnant uterus NbHPU Ho...	749	0.0
AA314922, AA314922 EST186735 HCC cell line (matastasis to liv...	698	0.0
AA082278, AA082278 zn42d12.r1 Stratagene endothelial cell 937...	668	0.0
H22613, H22613 yn64f03.r1 Homo sapiens cDNA clone 173213 5'.	624	e-177
AA044743, AA044743 zk67g12.s1 Soares pregnant uterus NbHPU Ho...	622	e-176
AA487470, AA487470 ab23b09.s1 Stratagene lung (#937210) Homo ...	601	e-170
AA121057, AA121057 zm22b03.r1 Stratagene pancreas (#937208) H...	581	e-164
AA194396, AA194396 zq05g05.s1 Stratagene muscle 937209 Homo s...	535	e-150
AA384283, AA384283 EST97787 Thyroid Homo sapiens cDNA 5' end	535	e-150
AA669015, AA669015 ab88f01.s1 Stratagene lung (#937210) Homo ...	535	e-150
AA194336, AA194336 zq05g05.r1 Stratagene muscle 937209 Homo s...	505	e-141
R96173, R96173 yt84e09.r1 Homo sapiens cDNA clone 231016 5'.	486	e-135
AA028934, AA028934 zk08b09.s1 Soares pregnant uterus NbHPU Ho...	484	e-134
AA564849, AA564849 nj22c04.s1 NCI_CGAP_AA1 Homo sapiens cDNA ...	442	e-122
AA932576, AA932576 oo57g10.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ...	440	e-121
AA876265, AA876265 oi12g09.s1 NCI_CGAP_GC4 Homo sapiens cDNA ...	434	e-120
AA025525, AA025525 ze86a11.s1 Soares fetal heart NbHH19W Homo...	430	e-118
U56654, HSU56654 Human heat shock inducible mRNA	426	e-117
AA746600, AA746600 nx18c02.s1 NCI_CGAP_GC3 Homo sapiens cDNA ...	406	e-111
AA876346, AA876346 oj24a11.s1 NCI_CGAP_Kid5 Homo sapiens cDNA...	406	e-111
W23082, W23082 78D1 Human retina cDNA Tsp509I-cleaved sublibr...	402	e-110
AI034059, AI034059 ow14h11.x1 Soares_parathyroid_tumor_NbHPA ...	357	2e-96
AA662934, AA662934 nu92d09.s1 NCI_CGAP_Pr22 Homo sapiens cDNA...	323	2e-86
AA844331, AA844331 ai95f01.s1 Soares parathyroid tumor NbHPA ...	301	8e-80
AA249866, AA249866 y0761.seq.F Human fetal heart, Lambda ZAP ...	297	1e-78
R19215, R19215 yg24b07.r1 Homo sapiens cDNA clone 33126 5'.	280	3e-73
T39355, T39355 ya04g08.r1 Homo sapiens cDNA clone 60542 5'.	254	2e-65
AA731264, AA731264 nw57c08.s1 NCI_CGAP_GCB1 Homo sapiens cDNA...	220	2e-55
AA768549, AA768549 oa67c07.s1 NCI_CGAP_GCB1 Homo sapiens cDNA...	220	2e-55
AA668506, AA668506 ac49a11.s1 Stratagene hNT neuron (#937233)...	216	4e-54
T55337, T55337 yb79b05.s1 Homo sapiens cDNA clone 77361 3'.	198	8e-49
AA860575, AA860575 aj86a09.s1 Soares parathyroid tumor NbHPA ...	198	8e-49
AA335548, AA335548 EST39962 Epididymus Homo sapiens cDNA 5' end	109	6e-22
R13183, R13183 yf73f02.r1 Homo sapiens cDNA clone 27960 5'.	58	2e-06
T80034, T80034 yd04c06.r1 Homo sapiens cDNA clone 24672 5'.	38	1.8
AA595230, AA595230 nl84g02.s1 NCI_CGAP_Br2 Homo sapiens cDNA ...	38	1.8

AA871935, AA871935 vq42h02.r1 Barstead bowel MPLRB9 Mus muscu... 664 0.0
 AA062330, AA062330 ml35e10.r1 Stratagene mouse testis (#93730... 589 e-167
 AI048164, AI048164 ud71b09.y1 Sugano mouse liver mlia Mus mus... 537 e-151
 W08037, W08037 mb37h01.r1 Soares mouse p3NMF19.5 Mus musculus... 462 e-128
 AA387311, AA387311 vc19a03.r1 Ko mouse embryo 11 5dpc Mus mus... 264 6e-69
 AA163072, AA163072 ms31a11.r1 Stratagene mouse skin (#937313)... 212 2e-53
 AA596763, AA596763 vm60a10.r1 Stratagene mouse Tcell 937311 M... 178 3e-43
 AA562549, AA562549 vl63a11.r1 Knowles Solter mouse blastocyst... 143 2e-32
 AA212378, AA212378 mu44c03.r1 Soares 2NbMT Mus musculus cDNA ... 113 1e-23
 AA450862, AA450862 vg55h12.r1 Beddington mouse embryonic regi... 111 5e-23
 AA990073, AA990073 ua59a01.r1 Soares 2NbMT Mus musculus cDNA ... 86 3e-15
 AA921175, AA921175 vy54b10.r1 Stratagene mouse lung 937302 Mu... 78 8e-13
 AA261119, AA261119 mz89e01.r1 Soares mouse NML Mus musculus c... 38 0.65
 AI005952, AI005952 ua80f06.r1 Soares 2NbMT Mus musculus cDNA ... 36 2.6
 AA123274, AA123274 mn23a08.r1 Beddington mouse embryonic regi... 36 2.6
 AI036828, AI036828 vw96c02.r1 Stratagene mouse skin (#937313)... 36 2.6

H35787, H35787 EST109178 Rat PC-12 cells, NGF-treated (9 days... 105 3e-21
 AA686082, AA686082 EST109179 Rat PC-12 cells, NGF-treated (9 ... 86 3e-15
 C23464, C23464 Jpanese flounder liver cDNA, LE5(10) 72 4e-11
 C23465, C23465 Jpanese flounder liver cDNA, LE5(10) 56 2e-06
 AA520314, AA520314 TgESTzz38h12.r1 TgME49 invivo Bradyzoite c... 38 0.57
 AA520085, AA520085 TgESTzz37g05.r1 TgME49 invivo Bradyzoite c... 38 0.57
 AA520033, AA520033 TgESTzz36f10.r1 TgME49 invivo Bradyzoite c... 38 0.57
 AA012516, AA012516 TgESTzz23f04.r1 TgME49cDNA Toxoplasma gond... 38 0.57
 AA274286, AA274286 TgESTzz24c01.s1 TgME49 invivo Bradyzoite c... 38 0.57
 AA660585, AA660585 00471 MtRHE Medicago truncatula cDNA 5' si... 38 0.57
 L35828, BNAESTBD Brassica rapa (clone F0621) expressed sequen... 38 0.57
 AA520070, AA520070 TgESTzz37e05.r1 TgME49 invivo Bradyzoite c... 38 0.57
 C30080, C30080 C.elegans cDNA clone yk236c3 : 3' end, single... 36 2.3
 C39044, C39044 C.elegans cDNA clone yk505a4 : 3' end, single... 36 2.3
 C55023, C55023 C.elegans cDNA clone yk422a3 : 3' end, single... 36 2.3
 AA542589, AA542589 fa08d06.s1 Zebrafish ICRFzfls Danio rerio ... 36 2.3
 N25370, N25370 EST000480 Schistosoma mansoni cDNA clone SMTBA... 36 2.3
 AA820625, AA820625 LD24443.5prime LD Drosophila melanogaster ... 36 2.3
 AA494922, AA494922 fa12g10.r1 Zebrafish ICRFzfls Danio rerio ... 36 2.3
 AA495181, AA495181 fa04d06.s1 Zebrafish ICRFzfls Danio rerio ... 36 2.3
 D73287, CELK116G6R C.elegans cDNA clone yk116g6 : 3' end, si... 36 2.3
 C28238, C28238 Rice cDNA, partial sequence (C60429_1A) 36 2.3

SEQ ID NO:557

AF039693, AF039693 Homo sapiens unknown protein mRNA, comple... 948 0.0
 S51239, S51239 calreticulin [Aplysia californica=marine snail... 56 1e-05
 Z74035, CEF47G9 Caenorhabditis elegans cosmid F47G9, comple... 46 0.012
 U25723, CPU25723 Cavia porcellus alpha-2B adrenoceptor gene, ... 44 0.047
 AL021407, HS13D10 Homo sapiens DNA sequence from PAC 13D10 o... 42 0.19
 U67572, U67572 Methanococcus jannaschii section 114 of 150 of... 42 0.19
 V01470, ZMZE01 Zea mays gene encoding a zein gene (clone lam... 42 0.19
 U06631, HSU06631 Human (H326) mRNA, complete cds. 42 0.19
 X82638, CSCYTOX C.sordelii cytotoxin gene 42 0.19
 AE000926, AE000926 Methanobacterium thermoautotrophicum from ... 42 0.19
 AC004135, AC004135 Genomic sequence for Arabidopsis thaliana ... 42 0.19
 AC003010, HUAC003010 Homo sapiens Chromosome 16 BAC clone CIT... 40 0.74
 AF050157, MMHC135G15 Mus musculus major histocompatibility lo... 40 0.74
 AC002352, AC002352 Homo sapiens 12q24 PAC P256D10 complete se... 40 0.74
 X07699, MMNUCLEO Mouse nucleolin gene 40 0.74
 X02399, MMHOM6 Mouse embryonal carcinoma DNA fragment contai... 40 0.74
 M93661, RATNOTCHX Rat notch 2 mRNA. 40 0.74
 M17440, MUSMHC4H2S Mouse MHC (H-2) S region complement compon... 40 0.74
 U15972, MMU15972 Mus musculus homeobox (Hoxa7) gene, complete... 40 0.74
 AB001601, AB001601 Homo sapiens DBP2 mRNA for ATP-dependent ... 40 0.74
 U09820, HSU09820 Human helicase II (RAD54L) mRNA, complete cds. 40 0.74
 AB011149, AB011149 Homo sapiens mRNA for KIAA0577 protein, c... 40 0.74
 U26259, MMU26259 Mus musculus C2-H2 zinc finger protein mRNA,... 40 0.74
 L48363, MUSZFPTR Mus musculus zinc finger protein gene, compl... 40 0.74
 AC003113, AC003113 Arabidopsis thaliana BAC F24O1 chromosome ... 40 0.74
 D76432, D76432 Mouse mRNA for transcriptional repressor delt... 40 0.74
 U72937, HSU72937 Human putative DNA dependent ATPase and heli... 40 0.74
 U72915, HSATRX16 Human putative DNA dependent ATPase and heli... 40 0.74
 U00995, U00995 Rattus norvegicus TA1 mRNA, complete cds. 40 0.74
 Z48618, SCCHVII35 S.cerevisiae genes for RAD54, ACE1(CUP2), ... 40 0.74
 U75653, HSU75653 Human zinc finger helicase (Znf-HX) mRNA, co... 40 0.74
 Z72672, SCYGL150C S.cerevisiae chromosome VII reading frame ... 40 0.74
 Z50109, CEC09H10 Caenorhabditis elegans cosmid C09H10, compl... 40 0.74
 AF013969, AF013969 Mus musculus antigen containing epitope to... 40 0.74
 M95627, HUMAAMP1X Homo sapiens angio-associated migratory cel... 40 0.74
 U72936, HSU72936 Human putative DNA dependent ATPase and heli... 40 0.74
 M88753, DROHTCHRPI Fruitfly heterochromatin protein-1 gene, c... 40 0.74
 U76906, REU76906 Rhizobium etli FixK (fixK), FixN (fixN), mon... 40 0.74
 U97085, HSXNP14 Homo sapiens X-linked nuclear protein (ATRX) ... 40 0.74
 L34363, HUMNUCPRO Human X-linked nuclear protein (XNP) gene, ... 40 0.74
 U72938, HSU72938 Human putative DNA dependent ATPase and heli... 40 0.74

X56983, EAVATP1 *E.arvense* gene for catalytic 70kDa V-ATPase ... 40 0.74
 U88539, MMU88539 *Mus musculus* chromatin structural protein ho... 40 0.74
 U07704, HSU07704 Human protein kinase PITSLRE isoform PBETA21... 38 2.9
 U07705, HSU07705 Human protein kinase PITSLRE isoform PBETA22... 38 2.9
 AF019612, AF019612 *Homo sapiens* S2P mRNA, complete cds 38 2.9
 U04818, HSU04818 Human protein kinase PITSLRE alpha 2-4 mRNA,... 38 2.9
 AB002381, AB002381 Human mRNA for KIAA0383 gene, partial cds 38 2.9
 AB009520, AB009520 *Pyrococcus horikoshii* OT3 genomic DNA, 13... 38 2.9
 Z83848, HS57A13 Human DNA sequence from PAC 57A13 between ma... 38 2.9
 AC004592, AC004592 *Homo sapiens* PAC clone DJ0244J05 from 5q31... 38 2.9
 L11710, ZEFZCMYC *Brachydanio rerio* c-myc oncogene mRNA, co... 38 2.9
 D43920, CHKMETASE *Chicken* mRNA for DNA (cytosine-5)-methylt... 38 2.9
 U49056, RNU49056 *Rattus norvegicus* CTD-binding SR-like protei... 38 2.9
 U04824, HSU04824 Human protein kinase PITSLRE alpha 2-1 mRNA,... 38 2.9
 U78045, HSU78045 Human collagenase and stromelysin genes, com... 38 2.9
 U04816, HSU04816 Human protein kinase PITSLRE alpha 2-2 mRNA,... 38 2.9
 U04817, HSU04817 Human protein kinase PITSLRE alpha 2-3 mRNA,... 38 2.9

HUMAN ESTs

AA639190, AA639190 ns04a01.r1 NCI_CGAP_Ew1 *Homo sapiens* cDNA ... 519 e-145
 AA172199, AA172199 zo96a06.r1 Stratagene ovarian cancer (#937... 513 e-144
 R23642, R23642 yh35e03.r1 *Homo sapiens* cDNA clone 131740 5'. 490 e-136
 AA902270, AA902270 ok69e04.s1 NCI_CGAP_GC4 *Homo sapiens* cDNA ... 450 e-124
 AA947303, AA947303 ok20d04.s1 Soares_NSF_F8_9W_OT_PA_P_S1 Hom... 402 e-110
 AA588066, AA588066 nk10d08.s1 NCI_CGAP_Co2 *Homo sapiens* cDNA ... 347 1e-93
 AA412036, AA412036 zt68d09.s1 Soares testis NHT *Homo sapiens* ... 347 1e-93
 AA480337, AA480337 ne33a03.s1 NCI_CGAP_Co3 *Homo sapiens* cDNA ... 347 1e-93
 AA508745, AA508745 ni23a03.s1 NCI_CGAP_Co4 *Homo sapiens* cDNA ... 347 1e-93
 AA172083, AA172083 zo96a06.s1 Stratagene ovarian cancer (#937... 315 4e-84
 AA811913, AA811913 ob51d06.s1 NCI_CGAP_GCB1 *Homo sapiens* cDNA... 299 2e-79
 AA402403, AA402403 zt68d09.r1 Soares testis NHT *Homo sapiens* ... 299 2e-79
 AA725458, AA725458 ai16g01.s1 Soares parathyroid tumor NbHPA ... 250 2e-64
 R26558, R26558 yh35e02.s1 *Homo sapiens* cDNA clone 131738 3'. 250 2e-64
 W25749, W25749 11b4 Human retina cDNA randomly primed sublibr... 103 3e-20
 W27158, W27158 22h9 Human retina cDNA randomly primed sublibr... 66 6e-09
 AA737681, AA737681 nw63c04.s1 NCI_CGAP_GCB1 *Homo sapiens* cDNA... 42 0.090
 T65784, T65784 yc11f10.s1 *Homo sapiens* cDNA clone 80395 3' si... 42 0.090
 R52021, R52021 yg84h09.r1 *Homo sapiens* cDNA clone 40181 5' si... 42 0.090
 AA569993, AA569993 nm47h04.s1 NCI_CGAP_Br2 *Homo sapiens* cDNA ... 42 0.090
 R50149, R50149 yj61c05.s1 *Homo sapiens* cDNA clone 153224 3' s... 42 0.090
 R87930, R87930 yo47a11.s1 *Homo sapiens* cDNA clone 181052 3' s... 42 0.090
 AA812204, AA812204 ob84f01.s1 NCI_CGAP_GCB1 *Homo sapiens* cDNA... 42 0.090
 AA770224, AA770224 ah82e12.s1 Soares testis NHT *Homo sapiens* ... 42 0.090

D29591, HUMNK752 Human keratinocyte cDNA, clone 752 40 0.36
 AA324325, AA324325 EST27219 Cerebellum II Homo sapiens cDNA 5... 40 0.36
 AA053063, AA053063 zl71c03.r1 Stratagene colon (#937204) Homo... 40 0.36
 T35539, T35539 EST86964 Homo sapiens cDNA 5' end similar to N... 40 0.36
 AA974278, AA974278 oq14d03.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 40 0.36
 W26196, W26196 22b5 Human retina cDNA randomly primed sublibr... 40 0.36
 H92585, H92585 yt89c03.s1 Homo sapiens cDNA clone 231460 3'. 40 0.36
 AA232334, AA232334 zr27b04.r1 Stratagene NT2 neuronal precurs... 40 0.36
 N55775, N55775 J2481F Homo sapiens cDNA clone J2481 5'. 40 0.36
 R98701, R98701 yr31f08.s1 Homo sapiens cDNA clone 206919 3'. 40 0.36
 C14370, C14370 Human fetal brain cDNA 5'-end GEN-050F01 40 0.36
 H19156, H19156 yn50c01.r1 Homo sapiens cDNA clone 171840 5'. 40 0.36
 AA299557, AA299557 EST12080 Uterus tumor I Homo sapiens cDNA ... 40 0.36
 W84460, W84460 zd89d12.r1 Soares fetal heart NbHH19W Homo sap... 40 0.36
 T54194, T54194 ya90a02.r2 Homo sapiens cDNA clone 68906 5'. 40 0.36
 AA100203, AA100203 zm16f12.r1 Stratagene pancreas (#937208) H... 38 1.4
 AA993061, AA993061 ot92h08.s1 Soares_total_fetus_Nb2HF8_9w Ho... 38 1.4
 R53406, R53406 yj70d07.r1 Homo sapiens cDNA clone 154093 5' s... 38 1.4
 H99671, H99671 yx35b03.s1 Homo sapiens cDNA clone 263693 3'. 38 1.4
 W03410, W03410 za07c09.r1 Soares melanocyte 2NbHM Homo sapien... 38 1.4
 N35475, N35475 yy24b03.s1 Homo sapiens cDNA clone 272141 3'. 38 1.4
 AA630851, AA630851 nt57f04.s1 NCI_CGAP_Pr3 Homo sapiens cDNA ... 38 1.4
 N66458, N66458 yz41b08.s1 Homo sapiens cDNA clone 285591 3'. 38 1.4
 AA736438, AA736438 zh31b09.s1 Soares pineal gland N3HPG Homo ... 38 1.4
 AA911761, AA911761 og19b01.s1 NCI_CGAP_PNS1 Homo sapiens cDNA... 38 1.4
 AA085513, AA085513 zn43a10.r1 Stratagene HeLa cell s3 937216 ... 38 1.4
 AA678530, AA678530 ah02e05.s1 Gessler Wilms tumor Homo sapien... 38 1.4
 AA782011, AA782011 ai75b12.s1 Soares testis NHT Homo sapiens ... 38 1.4
 F12352, HSC38H091 H. sapiens partial cDNA sequence; clone c-... 38 1.4
 AA861288, AA861288 ak33g01.s1 Soares testis NHT Homo sapiens ... 38 1.4
 AA908705, AA908705 ol01b09.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ... 38 1.4
 AA298850, AA298850 EST114450 Thyroid Homo sapiens cDNA 5' end 38 1.4

AA237204, AA237204 mx18d02.r1 Soares mouse NML Mus musculus c... 172 1e-41
 AI047347, AI047347 ud65c01.y1 Sugano mouse liver mlia Mus mus... 42 0.032
 AA832736, AA832736 vw45g10.r1 Soares mouse mammary gland NbMM... 42 0.032
 AA960471, AA960471 vw63a05.s1 Soares mouse mammary gland NMLM... 40 0.13
 AA880584, AA880584 vw92e01.r1 Stratagene mouse skin (#937313)... 40 0.13
 AA107508, AA107508 mp05e07.r1 Life Tech mouse embryo 8 5dpc 1... 40 0.13
 AA116682, AA116682 mn28c06.r1 Beddington mouse embryonic regi... 40 0.13
 AA522310, AA522310 vi45b02.r1 Beddington mouse embryonic regi... 40 0.13
 AA162231, AA162231 mn44h02.r1 Beddington mouse embryonic regi... 40 0.13

AA414037, AA414037 vc68g03.s1 Knowles Solter mouse 2 cell Mus... 40 0.13
AA596585, AA596585 vm58e12.r1 Stratagene mouse Tcell 937311 M... 38 0.51
AA863563, AA863563 vx05a10.r1 Soares 2NbMT Mus musculus cDNA ... 38 0.51
AA795177, AA795177 vq94g04.r1 Knowles Solter mouse blastocyst... 38 0.51
AA914764, AA914764 vy92h04.r1 Soares mouse mammary gland NbMM... 38 0.51
AA590440, AA590440 vm20c04.r1 Knowles Solter mouse blastocyst... 38 0.51
AA563402, AA563402 vl75d08.r1 Knowles Solter mouse blastocyst... 38 0.51
AA260352, AA260352 va93c10.r1 Soares mouse 3NME12 5 Mus muscu... 38 0.51
AA444734, AA444734 ve75d10.r1 Soares mouse mammary gland NbMM... 38 0.51
C85885, C85885 Mus musculus fertilized egg cDNA 3'-end seque... 38 0.51
AA794590, AA794590 vu78h12.r1 Stratagene mouse skin (#937313)... 38 0.51
AA529643, AA529643 vi38a09.r1 Beddington mouse embryonic regi... 38 0.51
AA607084, AA607084 vm84a09.r1 Knowles Solter mouse blastocyst... 38 0.51
AA636994, AA636994 vn05g06.r1 Knowles Solter mouse blastocyst... 38 0.51
AA675676, AA675676 vr73h08.s1 Knowles Solter mouse 2 cell Mus... 38 0.51
AA163890, AA163890 ms52f09.r1 Life Tech mouse embryo 13 5dpc ... 38 0.51
C80539, C80539 Mus musculus 3.5-dpc blastocyst cDNA 3'-end s... 38 0.51
AA051352, AA051352 mj53a09.r1 Soares mouse embryo NbME13.5 14... 38 0.51
W36885, W36885 mb64f09.r1 Soares mouse p3NMF19.5 Mus musculus... 38 0.51
AA930627, AA930627 vy67c05.r1 Stratagene mouse macrophage (#9... 38 0.51
AA244639, AA244639 mx02g12.r1 Soares mouse NML Mus musculus c... 36 2.0
AA967267, AA967267 vz70e08.r1 Soares mouse mammary gland NbMM... 36 2.0
AI048938, AI048938 uc84h06.y1 Sugano mouse kidney mkia Mus mu... 36 2.0
AA162722, AA162722 mn42b07.r1 Beddington mouse embryonic regi... 36 2.0
AA170036, AA170036 ms52d01.r1 Life Tech mouse embryo 13 5dpc ... 36 2.0
AA511382, AA511382 vg14b04.r1 Soares mouse NbMH Mus musculus ... 36 2.0
AA555634, AA555634 vk49f08.r1 Stratagene mouse Tcell 937311 M... 36 2.0
AA212823, AA212823 mw81c07.r1 Soares mouse NML Mus musculus c... 36 2.0
AA606813, AA606813 vm90h12.r1 Knowles Solter mouse blastocyst... 36 2.0
AA591610, AA591610 vk49d08.r1 Stratagene mouse Tcell 937311 M... 36 2.0
AA987039, AA987039 uc74e05.x1 Sugano mouse liver mlia Mus mus... 36 2.0
AA105882, AA105882 ml84h07.r1 Stratagene mouse kidney (#93731... 36 2.0
AA451370, AA451370 vf84h02.r1 Soares mouse mammary gland NbMM... 36 2.0
AA612185, AA612185 vo03d05.r1 Stratagene mouse skin (#937313)... 36 2.0
AA103424, AA103424 mo21e05.r1 Life Tech mouse embryo 13 5dpc ... 36 2.0
AA145817, AA145817 mq68a12.r1 Soares 2NbMT Mus musculus cDNA ... 36 2.0
AA272905, AA272905 va39d01.r1 Soares mouse 3NME12 5 Mus muscu... 36 2.0
AA237313, AA237313 mx17b11.r1 Soares mouse NML Mus musculus c... 36 2.0
AA267119, AA267119 mz74d07.r1 Soares mouse lymph node NbMLN M... 36 2.0
AA106683, AA106683 ml83h06.r1 Stratagene mouse kidney (#93731... 36 2.0
AA125061, AA125061 mq83d10.r1 Stratagene mouse melanoma (#937... 36 2.0
AA655241, AA655241 vq84c07.s1 Knowles Solter mouse 2 cell Mus... 36 2.0
AA512835, AA512835 vg13f11.r1 Soares mouse NbMH Mus musculus ... 36 2.0

C70525, C70525 C.elegans cDNA clone yk409g6 : 5' end, single... 44 0.007
 F15112, SSO4D09 S.scrofa mRNA; expressed sequence tag (5'; c... 42 0.029
 AA684640, AA684640 EST104989 Rat PC-12 cells, untreated Rattu... 40 0.11
 H32045, H32045 EST106774 Rat PC-12 cells, untreated Rattus sp... 40 0.11
 AA660422, AA660422 00298 MtRHE Medicago truncatula cDNA 5' 40 0.11
 C59696, C59696 C.elegans cDNA clone yk440e1 : 3' end, single... 38 0.45
 AI008699, AI008699 EST203150 Normalized rat embryo, Bento Soa... 38 0.45
 AA753263, AA753263 96BS0294 Rice Immature Seed Lambda ZAPII c... 38 0.45
 T38461, T38461 EST103957 Saccharomyces cerevisiae cDNA 3' end. 38 0.45
 C59257, C59257 C.elegans cDNA clone yk386b12 : 3' end, singl... 38 0.45
 AA948906, AA948906 LD27590.5prime LD Drosophila melanogaster ... 38 0.45
 AI001628, AI001628 EST0210 Tilapia brain cDNA library in pUC1... 38 0.45
 H31962, H31962 EST106545 Rat PC-12 cells, untreated Rattus sp... 38 0.45
 AA979509, AA979509 LD34118.5prime LD Drosophila melanogaster ... 38 0.45
 D41274, RICS3647A Rice cDNA, partial sequence (S3647_1A). 38 0.45
 C58362, C58362 C.elegans cDNA clone yk366a8 : 3' end, single... 38 0.45
 C57756, C57756 C.elegans cDNA clone yk298b9 : 3' end, single... 38 0.45
 AA753070, AA753070 97AS2091 Rice Immature Seed Lambda ZAPII c... 38 0.45
 H74687, H74687 383 Brassica napus cDNA clone R25R. 38 0.45
 C10513, C10513 C.elegans cDNA clone yk147e9 : 3' end, single... 38 0.45
 C55569, C55569 C.elegans cDNA clone yk191d1 : 3' end, single... 38 0.45
 C94819, C94819 Sus scrofa mRNA; expressed sequence tag (5'; ... 38 0.45
 C32982, C32982 C.elegans cDNA clone yk338a12 : 3' end, singl... 38 0.45
 AA816691, AA816691 LD03795.5prime LD Drosophila melanogaster ... 36 1.8
 AA519844, AA519844 TgESTzz36c03.r1 TgME49 invivo Bradyzoite c... 36 1.8
 AA531839, AA531839 TgESTzz47h05.r1 TgME49 invivo Bradyzoite c... 36 1.8
 AA660182, AA660182 00022 MtRHE Medicago truncatula cDNA 5' si... 36 1.8
 D71983, CELK084H2R C.elegans cDNA clone yk84h2 : 3' end, sin... 36 1.8
 R29905, R29905 12510 Lambda-PRL2 Arabidopsis thaliana cDNA cl... 36 1.8
 AA519997, AA519997 TgESTzz36h03.r1 TgME49 invivo Bradyzoite c... 36 1.8
 U83048, BTU83048 Bos taurus clone 0429 mRNA sequence 36 1.8
 AA440655, AA440655 LD15510.5prime LD Drosophila melanogaster ... 36 1.8
 AA559374, AA559374 MU002092.NH3 York-Harrop-lung-A Schistosom... 36 1.8
 C93857, C93857 Dictyostelium discoideum slug cDNA, clone SSL794 36 1.8
 AA520901, AA520901 TgESTzz65a05.r1 TgME49 invivo Bradyzoite c... 36 1.8
 T46158, T46158 9421 Lambda-PRL2 Arabidopsis thaliana cDNA clo... 36 1.8
 AA520866, AA520866 TgESTzz68e05.r1 TgME49 invivo Bradyzoite c... 36 1.8
 Z17562, ATTS0136 A. thaliana transcribed sequence; clone TAT... 36 1.8
 AA520811, AA520811 TgESTzz64d05.r1 TgME49 invivo Bradyzoite c... 36 1.8
 AA567455, AA567455 HL01288.5prime HL Drosophila melanogaster ... 36 1.8
 AA519228, AA519228 TgESTzz39h02.s1 TgME49 invivo Bradyzoite c... 36 1.8
 AA531917, AA531917 TgESTzz48f01.r1 TgME49 invivo Bradyzoite c... 36 1.8
 AA519829, AA519829 TgESTzz36a02.r1 TgME49 invivo Bradyzoite c... 36 1.8
 AA520185, AA520185 TgESTzz39d03.s1 TgME49 invivo Bradyzoite c... 36 1.8
 C37095, C37095 C.elegans cDNA clone yk482c11 : 3' end. singl... 36 1.8

T46009, T46009 9272 Lambda-PRL2 Arabidopsis thaliana cDNA clo... 36 1.8
 T20458, T20458 2466 Lambda-PRL2 Arabidopsis thaliana cDNA clo... 36 1.8
 F14402, ATTS5324 A. thaliana transcribed sequence; clone TAP... 36 1.8
 T20404, T20404 2412 Lambda-PRL2 Arabidopsis thaliana cDNA clo... 36 1.8
 AA274295, AA274295 TgESTzz24c11.s1 TgME49 invivo Bradyzoite c... 36 1.8
 AA699152, AA699152 HL07807.5prime HL Drosophila melanogaster ... 36 1.8
 AA902065, AA902065 NCM1A12T3 Mycelial Neurospora crassa cDNA ... 36 1.8

SEQ ID NO:558

AF016585, AF016585 Streptomyces caelestis cytochrome P-450 hy... 42 0.092
 U50719, MSU50719 Manduca sexta neuroglian mRNA, complete cds 40 0.36
 Z97208, SPAC15A10 S.pombe chromosome I cosmid c15A10 40 0.36
 AC003063, AC003063 Mus musculus Chromosome 16 BAC Clone b40-o... 40 0.36
 X66455, MMFGFR2 M.musculus promoter region of fibroblast gro... 40 0.36
 D83785, D83785 Human mRNA for KIAA0200 gene, complete cds 40 0.36
 AC000398, AC000398 Genomic sequence from Mouse 11, complete s... 38 1.4
 AF062345, AF062345 Caulobacter crescentus Sts1 (sts1), S-laye... 38 1.4
 X12359, RCNIFR12 Rhodobacter capsulatus nifR1 and nifR2 gene 38 1.4
 X72382, RCNIFR3 R.capsulatus nifR3 DNA 38 1.4

HUMAN ESTs

R36714, R36714 yh93g06.s1 Homo sapiens cDNA clone 137338 3'. 775 0.0
 D61030, HUM149A04B Human fetal brain cDNA 5'-end GEN-149A04. 666 0.0
 D60944, HUM141D02B Human fetal brain cDNA 5'-end GEN-141D02. 656 0.0
 H03308, H03308 yj47d09.s1 Homo sapiens cDNA clone 151889 3'. 609 e-172
 AA435561, AA435561 zt73d09.s1 Soares testis NHT Homo sapiens ... 587 e-166
 AA977877, AA977877 oq56d03.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 571 e-161
 AA846787, AA846787 aj41h03.s1 Soares testis NHT Homo sapiens ... 563 e-159
 AA972542, AA972542 oo82e01.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 561 e-158
 AA954270, AA954270 on72e06.s1 Soares_NFL_T_GBC_S1 Homo sapien... 557 e-157
 AA740333, AA740333 ob23c02.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 557 e-157
 AA999722, AA999722 ov04c06.s1 NCI_CGAP_Kid3 Homo sapiens cDNA... 555 e-156
 AA970621, AA970621 op40h08.s1 Soares_NFL_T_GBC_S1 Homo sapien... 551 e-155
 AA932930, AA932930 oo04g11.s1 Soares_NFL_T_GBC_S1 Homo sapien... 541 e-152
 AA725406, AA725406 ai13b11.s1 Soares parathyroid tumor NbHPA ... 539 e-152
 W74439, W74439 zd75d10.s1 Soares fetal heart NbHH19W Homo sap... 539 e-152
 AA868538, AA868538 ak43e08.s1 Soares testis NHT Homo sapiens ... 539 e-152
 R79832, R79832 yi89b08.s1 Homo sapiens cDNA clone 146391 3' s... 537 e-151

R63227, R63227 yi07e06.s1 Homo sapiens cDNA clone 138562 3'. 535 e-150
AI027967, AI027967 ov84d04.x1 Soares_testis_NHT Homo sapiens ... 535 e-150
AA776717, AA776717 ah49d07.s1 Soares testis NHT Homo sapiens ... 535 e-150
AI040961, AI040961 ov53d06.x1 Soares_testis_NHT Homo sapiens ... 533 e-150
AI024835, AI024835 ov35h09.x1 Soares_testis_NHT Homo sapiens ... 533 e-150
AA740667, AA740667 ob01g12.s1 NCI_CGAP_Kid3 Homo sapiens cDNA... 531 e-149
AA994527, AA994527 ou42h06.s1 SoaresNFL_T_GBC_S1 Homo sapien... 531 e-149
AA932728, AA932728 oo31g06.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ... 529 e-149
AI001978, AI001978 ot39f03.s1 Soares_testis_NHT Homo sapiens ... 529 e-149
N37092, N37092 yy41g08.s1 Homo sapiens cDNA clone 273854 3'. 529 e-149
N27547, N27547 yy01e05.s1 Homo sapiens cDNA clone 269984 3'. 527 e-148
AA883578, AA883578 al46b08.s1 Soares NFL T GBC S1 Homo sapien... 527 e-148
AA890154, AA890154 al53f07.s1 SoaresNFL_T_GBC_S1 Homo sapien... 525 e-147
AA757222, AA757222 ah56f11.s1 Soares testis NHT Homo sapiens ... 525 e-147
AA456074, AA456074 aa17b07.s1 Soares NhHMPu S1 Homo sapiens c... 523 e-147
AA884285, AA884285 am32f04.s1 Soares NFL T GBC S1 Homo sapien... 523 e-147
AA969436, AA969436 op53e12.s1 SoaresNFL_T_GBC_S1 Homo sapien... 521 e-146
AA952918, AA952918 on55h11.s1 SoaresNFL_T_GBC_S1 Homo sapien... 521 e-146
AA971938, AA971938 op88b01.s1 SoaresNFL_T_GBC_S1 Homo sapien... 521 e-146
R25112, R25112 yh36b12.s1 Homo sapiens cDNA clone 131807 3'. 519 e-146
AA865258, AA865258 og87d08.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 519 e-146
AA758323, AA758323 ah65e11.s1 Soares testis NHT Homo sapiens ... 519 e-146
AA972041, AA972041 op88e06.s1 SoaresNFL_T_GBC_S1 Homo sapien... 519 e-146
R76443, R76443 yi58e11.s1 Homo sapiens cDNA clone 143468 3'. 519 e-146
AA917965, AA917965 om37e04.s1 SoaresNFL_T_GBC_S1 Homo sapien... 517 e-145
AA505880, AA505880 ni01a09.s1 NCI_CGAP_Br2 Homo sapiens cDNA ... 517 e-145
AA906270, AA906270 oj98e12.s1 SoaresNFL_T_GBC_S1 Homo sapien... 517 e-145
AA758549, AA758549 ah70b04.s1 Soares testis NHT Homo sapiens ... 517 e-145
AA927156, AA927156 om20f05.s1 SoaresNFL_T_GBC_S1 Homo sapien... 515 e-144
AA976254, AA976254 oo30f08.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ... 515 e-144
R23891, R23891 yh28a12.s1 Homo sapiens cDNA clone 131038 3'. 515 e-144
AA938552, AA938552 oo78g11.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 513 e-144
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AA962659, AA962659 or31f10.s1 NCI_CGAP_GC3 Homo sapiens cDNA ... 511 e-143
AA724803, AA724803 ai05f02.s1 Soares parathyroid tumor NbHPA ... 511 e-143
AA410432, AA410432 zv12c09.s1 Soares NhHMPu S1 Homo sapiens c... 511 e-143
AA775373, AA775373 ad19c07.s1 Soares NbHFB Homo sapiens cDNA ... 511 e-143
AA758038, AA758038 ah67h09.s1 Soares testis NHT Homo sapiens ... 509 e-143
AA904368, AA904368 ol15d02.s1 SoaresNFL_T_GBC_S1 Homo sapien... 509 e-143
AA861386, AA861386 ak37b11.s1 Soares testis NHT Homo sapiens ... 507 e-142
R31547, R31547 yh72g03.s1 Homo sapiens cDNA clone 135316 3'. 505 e-141
AA843421, AA843421 ak07f11.s1 Soares parathyroid tumor NbHPA ... 504 e-141
H02479, H02479 yj35e10.s1 Homo sapiens cDNA clone 150762 3'. 504 e-141
N29346, N29346 yw85c12.s1 Homo sapiens cDNA clone 259030 3'. 504 e-141
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AA923373, AA923373 ol46e03.s1 Soares_NFL_T_GBC_S1 Homo sapien... 502 e-140
H01218, H01218 yj31c08.s1 Homo sapiens cDNA clone 150350 3'. 500 e-140
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AA628621, AA628621 af40c02.s1 Soares total fetus Nb2HF8 9w Ho... 500 e-140
AA442745, AA442745 zv60a07.s1 Soares testis NHT Homo sapiens ... 498 e-139
AA777492, AA777492 zj02e07.s1 Soares fetal liver spleen 1NFLS... 498 e-139
R73670, R73670 yi55f03.s1 Homo sapiens cDNA clone 143165 3'. 498 e-139
H12460, H12460 yj12d05.s1 Homo sapiens cDNA clone 148521 3'. 498 e-139
AA875917, AA875917 oj15a08.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 496 e-138
R76230, R76230 yi71g11.s1 Homo sapiens cDNA clone 144740 3'. 494 e-138
AA970616, AA970616 op40h03.s1 Soares_NFL_T_GBC_S1 Homo sapien... 494 e-138
AA912408, AA912408 ol23a05.s1 Soares_NFL_T_GBC_S1 Homo sapien... 492 e-137
AA910051, AA910051 ol40e08.s1 Soares_NFL_T_GBC_S1 Homo sapien... 492 e-137
AA815444, AA815444 ai65b11.s1 Soares testis NHT Homo sapiens ... 492 e-137
R76814, R76814 yi62f06.s1 Homo sapiens cDNA clone 143843 3'. 488 e-136
AA954722, AA954722 oo84c12.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 488 e-136
R65987, R65987 yi23e10.s1 Homo sapiens cDNA clone 140106 3'. 486 e-136
R63480, R63480 yi08e11.s1 Homo sapiens cDNA clone 138668 3'. 486 e-136
AA885425, AA885425 am12h09.s1 Soares NFL T GBC S1 Homo sapien... 486 e-136
AA884231, AA884231 am32a01.s1 Soares NFL T GBC S1 Homo sapien... 484 e-135
AA885048, AA885048 am11a12.s1 Soares NFL T GBC S1 Homo sapien... 482 e-134
AA996162, AA996162 os14f10.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ... 482 e-134
AA748637, AA748637 ny10a02.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 482 e-134
AI031908, AI031908 ow47e12.x1 Soares_parathyroid_tumor_NbHPA ... 482 e-134
AA884703, AA884703 am18e02.s1 Soares NFL T GBC S1 Homo sapien... 480 e-134
AA928243, AA928243 on87c10.s1 Soares_NFL_T_GBC_S1 Homo sapien... 480 e-134
AI025986, AI025986 ow03a09.s1 Soares_parathyroid_tumor_NbHPA ... 478 e-133
AA897637, AA897637 oj72g07.s1 Soares_NFL_T_GBC_S1 Homo sapien... 472 e-131
AA877346, AA877346 01c07.s1 NCI_CGAP_Co10 Homo sapiens cDNA... 472 e-131
AA833569, AA833569 aj46b02.s1 Soares testis NHT Homo sapiens ... 472 e-131
AA832163, AA832163 oc91b02.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 470 e-131
R89052, R89052 ym99e08.s1 Homo sapiens cDNA clone 167078 3'. 470 e-131
N26589, N26589 yx91f03.s1 Homo sapiens cDNA clone 269117 3'. 460 e-128
R73883, R73883 yi56c03.s1 Homo sapiens cDNA clone 143236 3'. 454 e-126
AA579968, AA579968 ng51c03.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 444 e-123
AA843427, AA843427 ak07g06.s1 Soares parathyroid tumor NbHPA ... 438 e-121
AA705903, AA705903 ah42g12.s1 Soares testis NHT Homo sapiens ... 436 e-121
AA835882, AA835882 oc81d05.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 434 e-120
AA812583, AA812583 aj43b02.s1 Soares testis NHT Homo sapiens ... 432 e-119
AA512970, AA512970 nj16b08.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 432 e-119
R26664, R26664 yh35g10.s1 Homo sapiens cDNA clone 131778 3'. 428 e-118
AA429715, AA429715 zv60a07.r1 Soares testis NHT Homo sapiens ... 414 e-114
H17430, H17430 ym40f09.s1 Homo sapiens cDNA clone 50607 3'. 404 e-111
AA436117, AA436117 zu03d10.r1 Soares testis NHT Homo sapiens ... 402 e-110
AA099077, AA099077 zl77a09.s1 Stratagene colon (#937204) Homo... 400 e-110

R72440, R72440 yj90h02.s1 Homo sapiens cDNA clone 156051 3'. 379 e-103
 AA577436, AA577436 nm96h06.s1 NCI_CGAP_Co9 Homo sapiens cDNA ... 351 4e-95
 AA516390, AA516390 nf55e03.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 347 6e-94
 AA534533, AA534533 nf80h06.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 341 3e-92
 AA541583, AA541583 ni89f05.s1 NCI_CGAP_Pr21 Homo sapiens cDNA... 311 3e-83
 N72191, N72191 yz99f07.s1 Homo sapiens cDNA clone 291205 3'. 303 8e-81
 AA905015, AA905015 ok09b08.s1 Soares_NFL_T_GBC_S1 Homo sapien... 303 8e-81
 AA393148, AA393148 zt73d09.r1 Soares testis NHT Homo sapiens ... 287 4e-76
 AA939048, AA939048 op56h04.s1 Soares_NFL_T_GBC_S1 Homo sapien... 256 2e-66
 AA412317, AA412317 zt97c05.r1 Soares testis NHT Homo sapiens ... 246 2e-63
 R65986, R65986 yi23e10.r1 Homo sapiens cDNA clone 140106 5'. 238 4e-61
 AA400827, AA400827 zt76c07.s1 Soares testis NHT Homo sapiens ... 232 2e-59
 W00472, W00472 yz99f07.r1 Homo sapiens cDNA clone 291205 5'. 180 8e-44
 AA860558, AA860558 aj81e09.s1 Soares parathyroid tumor NbHPA ... 180 8e-44
 AA455577, AA455577 aa17b07.r1 Soares NhHMPu S1 Homo sapiens c... 176 1e-42
 AA583931, AA583931 nn64e04.s1 NCI_CGAP_Lar1 Homo sapiens cDNA... 172 2e-41
 AA907332, AA907332 ol22g11.s1 Soares_NFL_T_GBC_S1 Homo sapien... 168 3e-40
 R71169, R71169 yi53a12.r1 Homo sapiens cDNA clone 142942 5'. 159 3e-37
 W79084, W79084 zd75d10.r1 Soares fetal heart NbHH19W Homo sap... 155 4e-36
 AA295914, AA295914 EST101137 Thymus III Homo sapiens cDNA 5' end 135 4e-30
 AA860415, AA860415 aj60d10.s1 Soares testis NHT Homo sapiens ... 100 2e-19
 H01351, H01351 yi99a07.r1 Homo sapiens cDNA clone 147348 5'. 98 9e-19
 AA709286, AA709286 ai21g07.s1 Soares testis NHT Homo sapiens ... 96 3e-18
 AA931370, AA931370 oo03d01.s1 Soares_NFL_T_GBC_S1 Homo sapien... 96 3e-18
 AA501911, AA501911 ng54a08.s1 NCI_CGAP_Li2 Homo sapiens cDNA ... 94 1e-17
 AA548419, AA548419 nj14g09.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 92 5e-17
 AA588892, AA588892 no23b06.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 92 5e-17
 AI025228, AI025228 ov40h08.x1 Soares_testis_NHT Homo sapiens ... 76 3e-12
 R73757, R73757 yi55f03.r1 Homo sapiens cDNA clone 143165 5'. 74 1e-11
 R23710, R23710 yh35g10.r1 Homo sapiens cDNA clone 131778 5'. 56 3e-06
 N40362, N40362 yy01e05.r1 Homo sapiens cDNA clone 269984 5'. 50 2e-04
 H59895, H59895 yr04c12.r1 Homo sapiens cDNA clone 204310 5'. 48 7e-04
 H12509, H12509 yj12d05.r1 Homo sapiens cDNA clone 148521 5'. 44 0.011
 N20344, N20344 yx38d02.s1 Homo sapiens cDNA clone 264003 3'. 38 0.70
 AA614692, AA614692 np52b10.s1 NCI_CGAP_Br1.1 Homo sapiens cDN... 38 0.70
 H30707, H30707 yo78f07.r1 Homo sapiens cDNA clone 184069 5'. 36 2.7
 H52973, H52973 yq82e04.r1 Homo sapiens cDNA clone 202302 5'. 36 2.7
 AA218550, AA218550 zq96b02.r1 Stratagene NT2 neuronal precurs... 36 2.7
 AA312481, AA312481 EST183215 Jurkat T-cells VI Homo sapiens c... 36 2.7
 AA632009, AA632009 np74c07.s1 NCI_CGAP_Br2 Homo sapiens cDNA ... 36 2.7
 H13363, H13363 yl71b10.r1 Homo sapiens cDNA clone 43343 5'. 36 2.7
 AI022018, AI022018 ow64d01.x1 Soares_senescent_fibroblasts_Nb... 36 2.7
 AA781996, AA781996 ai75a06.s1 Soares testis NHT Homo sapiens ... 36 2.7
 N21623, N21623 yx60a09.s1 Homo sapiens cDNA clone 266104 3'. 36 2.7
 AA326194, AA326194 EST29340 Cerebellum II Homo sapiens cDNA 5... 36 2.7

C76071, C76071 Mus musculus 3.5-dpc blastocyst cDNA 3'-end s... 250 4e-65
 AA051612, AA051612 mj52c07.r1 Soares mouse embryo NbME13.5 14... 238 1e-61
 AA561635, AA561635 vl01h07.r1 Knowles Solter mouse blastocyst... 234 2e-60
 AA288419, AA288419 vb14h01.r1 Soares mouse NML Mus musculus c... 220 3e-56
 AA212883, AA212883 mw78e10.r1 Soares mouse NML Mus musculus c... 220 3e-56
 AA268018, AA268018 vb08e07.r1 Soares mouse NML Mus musculus c... 212 8e-54
 AA692427, AA692427 vt59b07.r1 Barstead mouse irradiated colon... 200 3e-50
 W18566, W18566 mb98h02.r1 Soares mouse p3NMF19.5 Mus musculus... 192 7e-48
 AA543948, AA543948 vj69b08.r1 Knowles Solter mouse blastocyst... 147 4e-34
 W41070, W41070 mc39b06.r1 Soares mouse p3NMF19.5 Mus musculus... 123 5e-27
 Z31174, MMTEST52 M.musculus expressed sequence tag MTEST52 117 3e-25
 AA530723, AA530723 vj32f07.r1 Stratagene mouse diaphragm (#93... 74 5e-12
 AA966940, AA966940 ua38c01.r1 Soares mouse mammary gland NbMM... 72 2e-11
 AA111079, AA111079 mp50e01.r1 Barstead MPLRB1 Mus musculus cD... 44 0.004
 AA049187, AA049187 mj51a02.r1 Soares mouse embryo NbME13.5 14... 36 0.99
 AA058246, AA058246 mg74e12.r1 Soares mouse embryo NbME13.5 14... 36 0.99
 AA153730, AA153730 mq60a02.r1 Soares 2NbMT Mus musculus cDNA ... 36 0.99
 AA473959, AA473959 vd02b12.s1 Knowles Solter mouse 2 cell Mus... 36 0.99
 W47887, W47887 mc83h09.r1 Soares mouse embryo NbME13.5 14.5 M... 36 0.99
 AA033312, AA033312 mi43g01.r1 Soares mouse embryo NbME13.5 14... 36 0.99
 AA980820, AA980820 ua46a04.r1 Soares mouse mammary gland NbMM... 36 0.99
 Z31139, MMTEST427 M.musculus expressed sequence tag MTEST427 36 0.99
 C76637, C76637 Mus musculus 3.5-dpc blastocyst cDNA 3'-end s... 34 3.9
 AI049314, AI049314 uc87b10.y1 Sugano mouse kidney mkia Mus mu... 34 3.9
 AA670807, AA670807 vs70b02.r1 Stratagene mouse skin (#937313)... 34 3.9
 AA727571, AA727571 vv01h11.r1 Stratagene mouse skin (#937313)... 34 3.9
 AA571966, AA571966 vg12f07.r1 Soares mouse NbMH Mus musculus ... 34 3.9
 W37059, W37059 mb73f10.r1 Soares mouse p3NMF19.5 Mus musculus... 34 3.9
 AA760280, AA760280 vv74h11.r1 Stratagene mouse skin (#937313)... 34 3.9
 AA799036, AA799036 vn40c12.r1 Stratagene mouse skin (#937313)... 34 3.9
 AA432831, AA432831 vf28g07.r1 Knowles Solter mouse 8 cell Mus... 34 3.9
 AA562435, AA562435 vk98c01.r1 Knowles Solter mouse blastocyst... 34 3.9
 AA726680, AA726680 vu93g12.r1 Stratagene mouse skin (#937313)... 34 3.9
 AA217464, AA217464 mu87d11.r1 Soares mouse lymph node NbMLN M... 34 3.9
 AA790564, AA790564 vx71e06.r1 Stratagene mouse skin (#937313)... 34 3.9
 AA033172, AA033172 mi37f06.r1 Soares mouse embryo NbME13.5 14... 34 3.9
 AA616204, AA616204 vo96h02.r1 Soares mouse mammary gland NbMM... 34 3.9
 AA982055, AA982055 ua37h05.r1 Soares mouse mammary gland NbMM... 34 3.9
 W47850, W47850 mc82h10.r1 Soares mouse embryo NbME13.5 14.5 M... 34 3.9
 AA537538, AA537538 vk48c12.r1 Soares mouse mammary gland NbMM... 34 3.9
 AA636986, AA636986 vn05f04.r1 Knowles Solter mouse blastocyst... 34 3.9

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 AA944260, AA944260 EST199759 Normalized rat embryo, Bento Soa... 38 0.22
 AI008930, AI008930 EST203381 Normalized rat embryo, Bento Soa... 36 0.87
 D15788, RICC1258A Rice cDNA, partial sequence (C1258A). 36 0.87
 AA963741, AA963741 UI-R-C0-gt-b-09-0-UI.s1 UI-R-C0 Rattus nor... 36 0.87
 AA951235, AA951235 LD31601.3prime LD Drosophila melanogaster ... 34 3.5
 C20118, C20118 Rice cDNA, partial sequence (E11542_2A) 34 3.5
 AA820317, AA820317 LD23876.5prime LD Drosophila melanogaster ... 34 3.5
 AA950448, AA950448 LD30237.3prime LD Drosophila melanogaster ... 34 3.5

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U83883, RNU83883 Rattus norvegicus p105 coactivator mRNA, com... 42 0.11
 V00722, MMBGL1 Mouse gene for beta-1-globin. 40 0.45
 X14061, MMBGCXD M.musculus beta-globin complex DNA for y, bh... 40 0.45
 U20824, EHVU20824 Equine herpesvirus 2, complete genome 38 1.8
 U04106, PFU04106 Pleurotus fossulatus D1822, mating group VI,... 38 1.8
 U04101, POU04101 Pleurotus ostreatus D1742, Japan, mating gro... 38 1.8
 AC005174, AC005174 Homo sapiens clone UWGC:g1564a012 from 7p1... 38 1.8
 M18680, HUMRGAPS Homo sapiens 5S rRNA pseudogene. 38 1.8
 AL022121, MTV025 Mycobacterium tuberculosis H37Rv complete g... 38 1.8
 AF038379, AF038379 Leishmania amazonensis ribosomal protein S... 38 1.8
 Z11528, THIGPMR T.harzianum mRNA for imidazoleglycerolphosphate 38 1.8
 U32622, CTU32622 Comamonas testosteroni TsaR (tsaR), toluenes... 38 1.8
 U04102, POU04102 Pleurotus ostreatus D1743, Japan, mating gro... 38 1.8
 U04105, PFU04105 Pleurotus fossulatus D1821, mating group VI,... 38 1.8
 U04109, PEU04109 Pleurotus eryngii D1832, mating group VI rib... 38 1.8
 U65606, BSU65606 Basidiomycete from a bamboo (Phyllostachys p... 38 1.8

HUMAN ESTs

R49969, R49969 yj56c07.s1 Homo sapiens cDNA clone 152748 3' s... 523 e-147
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 R47821, R47821 yj56c07.r1 Homo sapiens cDNA clone 152748 5'. 214 7e-54
 AA761660, AA761660 nz24b09.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 212 3e-53
 AA887861, AA887861 nq99b07.s1 NCI_CGAP_Co10 Homo sapiens cDNA... 74 2e-11
 AA644044, AA644044 nm20b12.s1 NCI_CGAP_Co10 Homo sapiens cDNA... 72 6e-11

AA115963, AA115963 zm78d11.s1 Stratagene neuroepithelium (#93... 40 0.22
 AA779271, AA779271 zj43f02.s1 Soares fetal liver spleen 1NFLS... 40 0.22
 T65600, T65600 yc76a04.r1 Homo sapiens cDNA clone 21496 5'. 38 0.86
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 AA664812, AA664812 nu69b05.s1 NCI_CGAP_Alv1 Homo sapiens cDNA... 36 3.4
 T83365, T83365 ye03f05.s1 Homo sapiens cDNA clone 116673 3'. 36 3.4
 AA009773, AA009773 zi04d04.s1 Soares fetal liver spleen 1NFLS... 36 3.4
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 N27865, N27865 yy02g03.s1 Homo sapiens cDNA clone 270100 3'. 36 3.4
 AA953544, AA953544 om79g06.s1 NCI_CGAP_Kid3 Homo sapiens cDNA... 36 3.4
 AA505576, AA505576 nh93f03.s1 NCI_CGAP_Br2 Homo sapiens cDNA ... 36 3.4
 H30276, H30276 yp42f05.s1 Homo sapiens cDNA clone 190113 3'. 36 3.4
 AA699914, AA699914 zi61f08.s1 Soares fetal liver spleen 1NFLS... 36 3.4
 AA595583, AA595583 nk92c04.s1 NCI_CGAP_Co11 Homo sapiens cDNA... 36 3.4
 AA351139, AA351139 EST58769 Infant brain Homo sapiens cDNA 5'... 36 3.4
 AA810167, AA810167 ob88a03.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 36 3.4
 H50257, H50257 yo28a07.r1 Homo sapiens cDNA clone 179220 5'. 36 3.4
 W19939, W19939 zb37e09.r1 Soares parathyroid tumor NbHPA Homo... 36 3.4
 R19840, R19840 yg30e11.r1 Homo sapiens cDNA clone 33837 5'. 36 3.4
 AA514234, AA514234 nf56e10.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 36 3.4

AA183407, AA183407 ms
 AA821640, AA821640 vw
 AA289310, AA289310

AA900756, AA900756 UI-R-E0-di-d-04-0-UI.s1 UI-R-E0 Rattus nor... 46 0.001
 T18416, T18416 6c02e07t7 etiolated seedling Zea mays cDNA clo... 40 0.069
 AA817427, AA817427 LD22827.5prime LD Drosophila melanogaster ... 36 1.1
 AA274351, AA274351 TgESTzz25c09.s1 TgME49 invivo Bradyzoite c... 36 1.1
 AA391823, AA391823 LD10747.5prime LD Drosophila melanogaster ... 36 1.1
 AA274275, AA274275 TgESTzz24b02.s1 TgME49 invivo Bradyzoite c... 34 4.3
 R86490, R86490 RABEST068T Oryctolagus cuniculus cDNA clone pR... 34 4.3
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SEQ ID NO:560

X81198, L35746, L49403, U21317, Z35640, AL010273, U09850, AF071771, Z96434.

Z50028, X72735, U13072, Z34294, AB002109, X68401, M92840, D88399, Z36238, AF000262, Z46828,

HUMAN ESTs

AA215808, AA215808 zr98b10.r1 NCI_CGAP_GCB1 Homo sapiens cDNA... 1082 0.0
 N75131, N75131 yz29g07.r1 Soares multiple sclerosis 2NbHMSP H... 989 0.0
 AA709149, AA709149 zf98g05.s1 Soares fetal heart NbHH19W Homo... 985 0.0
 AA428341, AA428341 zw18f09.s1 Soares ovary tumor NbHOT Homo s... 967 0.0
 AA043426, AA043426 zk54h09.r1 Soares pregnant uterus NbHPU Ho... 870 0.0
 AA878521, AA878521 oj19c01.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 844 0.0
 AA599696, AA599696 ag10h01.s1 Gessler Wilms tumor Homo sapien... 842 0.0
 W52304, W52304 zc47c08.r1 Soares senescent fibroblasts NbHSF ... 841 0.0
 AA043427, AA043427 zk54h09.s1 Soares pregnant uterus NbHPU Ho... 769 0.0
 N64314, N64314 yz46a12.s1 Homo sapiens cDNA clone 286078 3'. 763 0.0
 N52360, N52360 yz29g07.s1 Soares multiple sclerosis 2NbHMSP H... 753 0.0
 AA290863, AA290863 zt19a08.s1 Soares ovary tumor NbHOT Homo s... 747 0.0
 AA768023, AA768023 oa60e03.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 728 0.0
 AA872018, AA872018 oi05f08.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 718 0.0
 AA164765, AA164765 zp01g09.s1 Stratagene ovarian cancer (#937... 716 0.0
 AA814881, AA814881 oa75e02.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 708 0.0
 R86915, R86915 yq30f07.r1 Homo sapiens cDNA clone 197317 5'. 692 0.0
 W56703, W56703 zd14e01.r1 Soares fetal heart NbHH19W Homo sap... 642 0.0
 R84872, R84872 yq27e01.r1 Soares fetal liver spleen 1NFLS Hom... 636 0.0
 D79691, HUM307D10B Human aorta cDNA 5'-end GEN-307D10. 630 e-179
 AA025638, AA025638 ze90d11.s1 Soares fetal heart NbHH19W Homo... 626 e-178
 AA298883, AA298883 EST114512 Pancreas tumor I Homo sapiens cD... 624 e-177
 R86903, R86903 yq30d07.r1 Homo sapiens cDNA clone 197293 5'. 622 e-176
 AA033584, AA033584 zk21b12.s1 Soares pregnant uterus NbHPU Ho... 618 e-175
 AA633335, AA633335 nq58h09.s1 NCI_CGAP_Co9 Homo sapiens cDNA ... 611 e-173
 AA298894, AA298894 EST114513 Pancreas tumor I Homo sapiens cD... 599 e-169
 R85806, R85806 yq27e01.s1 Soares fetal liver spleen 1NFLS Hom... 595 e-168
 AA872617, AA872617 oi05g07.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 591 e-167
 H71458, H71458 yu71a06.s1 Homo sapiens cDNA clone 239218 3'. 587 e-166
 AA291045, AA291045 zt19a08.r1 Soares ovary tumor NbHOT Homo s... 563 e-159
 H71587, H71587 yu71a06.r1 Homo sapiens cDNA clone 239218 5'. 543 e-153
 AA035172, AA035172 zk28g05.s1 Soares pregnant uterus NbHPU Ho... 523 e-147
 AA164764, AA164764 zp01g09.r1 Stratagene ovarian cancer (#937... 517 e-145
 AA297001, AA297001 EST112550 Adipose tissue, white II Homo sa... 502 e-140
 AA296816, AA296816 EST112381 Aorta endothelial cells Homo sap... 500 e-139
 AA769090, AA769090 oa74e12.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 494 e-138
 H54447, H54447 yq91f04.s1 Homo sapiens cDNA clone 203167 3'. 438 e-121
 H54537, H54537 yq91f04.r1 Homo sapiens cDNA clone 203167 5'. 436 e-120
 AI049757, AI049757 an26g03.x1 Gessler Wilms tumor Homo sapien... 430 e-119

AA033583, AA033583 zk21b12.r1 Soares pregnant uterus NbHPU Ho... 422 e-116
 D61748, HUM205G02B Human aorta cDNA 5'-end GEN-205G02. 412 e-113
 AA148635, AA148635 zl26d10.r1 Soares pregnant uterus NbHPU Ho... 377 e-102
 AA148636, AA148636 zl26d10.s1 Soares pregnant uterus NbHPU Ho... 373 e-101
 AA025637, AA025637 ze90d11.r1 Soares fetal heart NbHH19W Homo... 371 e-101
 AA932620, AA932620 oo61h04.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ... 365 4e-99
 AA385594, AA385594 EST99296 Thyroid Homo sapiens cDNA 5' end 339 2e-91
 AA361957, AA361957 EST71295 T-cell lymphoma Homo sapiens cDNA... 289 2e-76
 AA383998, AA383998 EST97483 Thyroid Homo sapiens cDNA 5' end ... 274 1e-71
 H22175, H22175 yl38a03.r1 Homo sapiens cDNA clone 160492 5'. 256 3e-66
 R50060, R50060 yj59c10.r1 Homo sapiens cDNA clone 153042 5'. 256 3e-66
 AA229414, AA229414 nc47f12.r1 NCI_CGAP_Pr3 Homo sapiens cDNA ... 246 3e-63
 D20466, HUMGS01440 Human HL60 3'directed MboI cDNA, HUMGS014... 208 6e-52
 AA249061, AA249061 ll4438.seq.F Human fetal heart, Lambda ZAP... 168 5e-40
 R86758, R86758 yq30f07.s1 Homo sapiens cDNA clone 197317 3'. 147 2e-33
 R58025, R58025 F8018 Fetal heart Homo sapiens cDNA clone F801... 101 1e-19
 AA371076, AA371076 EST82846 Prostate gland I Homo sapiens cDN... 42 0.081
 AA977111, AA977111 oq24c03.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 40 0.32
 AA608923, AA608923 af03b04.s1 Soares testis NHT Homo sapiens ... 38 1.3

gb|AA386999|AA386999 vc81b02.r1 Ko mouse embryo 11 5dpc Mus mus... 668 0.0
 gb|AA589082|AA589082 vk24a08.r1 Knowles Solter mouse blastocyst... 658 0.0
 gb|AA510881|AA510881 vh59c11.r1 Soares mouse mammary gland NbMM... 617 e-175
 gb|AA763574|AA763574 vp07e08.r1 Soares mouse mammary gland NbMM... 615 e-174
 gb|AA387423|AA387423 vc84b03.r1 Ko mouse embryo 11 5dpc Mus mus... 549 e-155
 gb|AA915333|AA915333 vz28f05.r1 Soares 2NbMT Mus musculus cDNA ... 543 e-153
 gb|AA816208|AA816208 vp43c10.r1 Barstead mouse irradiated colon... 444 e-123
 gb|AA190043|AA190043 mt91h08.r1 Soares mouse lymph node NbMLN M... 424 e-117
 gb|AA207393|AA207393 mv89c09.r1 GuayWoodford Beier mouse kidney... 394 e-108
 emb|Z31258|MMTEST693 M.musculus expressed sequence tag MTEST693 309 8e-83
 gb|AA930143|AA930143 vz52d11.s1 Soares 2NbMT Mus musculus cDNA ... 293 5e-78
 gb|AA170612|AA170612 ms92c09.r1 Soares mouse 3NbMS Mus musculus... 287 3e-76
 gb|AA762238|AA762238 vw58h02.r1 Soares mouse mammary gland NMLM... 266 1e-69
 gb|AA689028|AA689028 vs02c12.r1 Barstead mouse irradiated colon... 264 4e-69
 gb|AA959938|AA959938 vw58h02.s1 Soares mouse mammary gland NMLM... 240 6e-62
 dbj|D18511|MUSGS01569 Mouse 3'-directed cDNA, MUSGS01569, clon... 172 1e-41
 gb|AA474393|AA474393 vd57g07.r1 Knowles Solter mouse blastocyst... 100 1e-19
 gb|W97165|W97165 mf90g05.r1 Soares mouse embryo NbME13.5 14.5 M... 74 8e-12
 gb|AA512077|AA512077 vj43f05.r1 Stratagene mouse skin (#937313)... 62 3e-08
 gb|AA794521|AA794521 vu68e07.r1 Stratagene mouse skin (#937313)... 54 8e-06
 gb|AA155454|AA155454 mn38h12.r1 Beddington mouse embryonic regi... 48 5e-04
 gb|W91000|W91000 mf83f06.r1 Soares mouse embryo NbME13.5 14.5 M... 40 0.12

gb|AA219917|AA219917 mv62f05.r1 Soares mouse 3NME12 5 Mus muscu... 38 0.45
 gb|AA529349|AA529349 vi35f08.r1 Beddington mouse embryonic regi... 36 1.8
 gb|AA754855|AA754855 vu51e08.r1 Soares mouse mammary gland NbMM... 36 1.8

gb|AA850379|AA850379 EST193146 Normalized rat ovary, Bento Soar... 569 e-161
 gb|W63375|W63375 TgESTzy68g02.r1 TgME49 Tachyzoite cDNA Toxopla... 394 e-108
 gb|AA946379|AA946379 EST201878 Normalized rat lung, Bento Soare... 353 5e-96
 gb|AA964427|AA964427 UI-R-E1-gp-a-08-0-UI.s1 UI-R-E1 Rattus nor... 335 1e-90
 gb|AA849599|AA849599 EST192366 Normalized rat muscle, Bento Soa... 307 3e-82
 gb|AA849595|AA849595 EST192362 Normalized rat muscle, Bento Soa... 307 3e-82
 gb|AA850378|AA850378 EST193145 Normalized rat ovary, Bento Soar... 278 3e-73
 gb|AA957389|AA957389 UI-R-E1-fu-b-04-0-UI.s1 UI-R-E1 Rattus nor... 157 6e-37
 gb|AI012981|AI012981 EST207432 Normalized rat spleen, Bento Soa... 147 6e-34
 dbj|C48357|C48357 C.elegans cDNA clone yk469b2 : 5' end, single... 40 0.10
 gb|AA440444|AA440444 LD15290.5prime LD Drosophila melanogaster ... 36 1.6
 dbj|C22690|C22690 Rice cDNA, partial sequence (S5274_4A) 36 1.6
 gb|AA697626|AA697626 HL02895.5prime HL Drosophila melanogaster ... 36 1.6
 gb|AA550136|AA550136 1244m3 gmbPfHB3.1, G. Roman Reddy Plasmodi... 36 1.6
 gb|T43579|T43579 6842 Lambda-PRL2 Arabidopsis thaliana cDNA clo... 36 1.6
 gb|AI030501|AI030501 UI-R-C0-jc-g-02-0-UI.s1 UI-R-C0 Rattus nor... 36 1.6
 gb|AA056876|AA056876 SWMFCA987SK Brugia malayi microfilaria cDN... 36 1.6
 gb|AA440689|AA440689 LD15550.5prime LD Drosophila melanogaster ... 36 1.6

SEQ ID NO:561

emb|Z47552|HSFMO3 H.sapiens mRNA for flavin-containing monooxyg... 44 0.10
 gb|U39966|HSFMO3G7 Homo sapiens flavin containing monooxygenase... 44 0.10
 emb|AL021026|HS127D3 Homo sapiens DNA sequence from PAC 127D3 o... 44 0.10
 gb|U35007|CPU35007 Carcharhinus plumbeus Ig lambda light chain ... 44 0.10
 gb|U35008|CPU35008 Carcharhinus plumbeus Ig lambda light chain ... 44 0.10
 dbj|D85068|RICKT3A Rice transposable element T3 gene and ret... 42 0.40
 dbj|D63711|RICKT3 Rice transposon T3 DNA, complete sequence 42 0.40
 gb|U01657|U01657 Carcharhinus plumbeus Ig lambda-chain gene. co... 42 0.40
 emb|Z92540|HS179I15A Human DNA sequence from PAC 179I15, BRCA2 ... 40 1.6
 dbj|AB001569|AB001569 Carrot DNA for transposon Tdc1 40 1.6
 gb|AE000613|HPAE000613 Helicobacter pylori section 91 of 134 of... 40 1.6
 emb|X07985|DMCUT Drosophila cut locus mRNA for homeodomain-cont... 40 1.6
 gb|AC005217|AC005217 Homo sapiens chromosome 5, P1 clone 1047D6... 40 1.6

HUMAN ESTs

gb|AA401219|AA401219 zv63a03.r1 Soares total fetus Nb2HF8 9w Ho... 993 0.0
 gb|H69371|H69371 yu19h09.r1 Homo sapiens cDNA clone 234305 5' s... 44 0.049
 gb|N62576|N62576 za13d10.s1 Homo sapiens cDNA clone 292435 3' s... 42 0.19
 gb|W77763|W77763 zd69c06.r1 Soares fetal heart NbHH19W Homo sap... 40 0.77
 gb|R14832|R14832 yf93g05.r1 Homo sapiens cDNA clone 30203 5'. 40 0.77
 gb|T90524|T90524 yd40a04.s1 Homo sapiens cDNA clone 110670 3' s... 38 3.0
 gb|R91887|R91887 yq04c09.r1 Homo sapiens cDNA clone 195952 5'. 38 3.0
 gb|AA586935|AA586935 nn68h03.s1 NCI_CGAP_Lar1 Homo sapiens cDNA... 38 3.0
 gb|T46987|T46987 yb12a07.s1 Homo sapiens cDNA clone 70932 3' co... 38 3.0
 gb|AA853975|AA853975 aj51f09.s1 Soares testis NHT Homo sapiens ... 38 3.0
 gb|T97059|T97059 ye50e01.r1 Homo sapiens cDNA clone 121176 5'. 38 3.0
 gb|AA883119|AA883119 am15h02.s1 Soares NFL T GBC S1 Homo sapien... 38 3.0
 gb|AA860074|AA860074 ak45b06.s1 Soares testis NHT Homo sapiens ... 38 3.0
 gb|AA889618|AA889618 ak28f06.s1 Soares_testis_NHT Homo sapiens ... 38 3.0

gb|AA230450|AA230450 mv73c06.r1 Soares mouse 3NME12 5 Mus muscu... 38 1.1
 gb|AA058041|AA058041 mj58e08.r1 Soares mouse embryo NbME13.5 14... 38 1.1
 gb|AA152953|AA152953 mq54a03.r1 Soares 2NbMT Mus musculus cDNA ... 38 1.1
 gb|W34414|W34414 ma98b07.r1 Soares mouse p3NMF19.5 Mus musculus... 38 1.1
 gb|AA465969|AA465969 ve90c06.s1 Knowles Solter mouse 2 cell Mus... 38 1.1
 gb|AA261173|AA261173 mz62b11.r1 Soares mouse lymph node NbMLN M... 38 1.1
 gb|AA238109|AA238109 mw97b05.r1 Soares mouse NML Mus musculus c... 38 1.1
 dbj|C86549|C86549 Mus musculus fertilized egg cDNA 3'-end seque... 38 1.1
 gb|AI048677|AI048677 ub29g09.r1 Soares 2NbMT Mus musculus cDNA ... 38 1.1
 dbj|D77921|MUSC1A08 Mouse embryonal carcinoma F9 cell cDNA, C1A08 38 1.1
 gb|AA396183|AA396183 vb45e04.r1 Soares mouse lymph node NbMLN M... 38 1.1
 gb|AA465898|AA465898 vc62f12.s1 Knowles Solter mouse 2 cell Mus... 36 4.3
 gb|AA041869|AA041869 mj05b12.r1 Soares mouse embryo NbME13.5 14... 36 4.3
 gb|AA637824|AA637824 vr21f11.r1 Barstead mouse myotubes MPLRB5 ... 36 4.3
 gb|W82563|W82563 mf05g06.r1 Soares mouse p3NMF19.5 Mus musculus... 36 4.3
 gb|AA389972|AA389972 vb30e03.r1 Soares mouse lymph node NbMLN M... 36 4.3
 gb|AA396253|AA396253 vb45f08.r1 Soares mouse lymph node NbMLN M... 36 4.3
 gb|AA920907|AA920907 vy84f04.r1 Stratagene mouse macrophage (#9... 36 4.3
 gb|AA517166|AA517166 vh98h05.r1 Barstead mouse myotubes MPLRB5 ... 36 4.3
 gb|AA433599|AA433599 vf47a05.r1 Soares mouse NbMH Mus musculus ... 36 4.3
 gb|AA867252|AA867252 vx25c01.r1 Soares 2NbMT Mus musculus cDNA ... 36 4.3
 dbj|C85619|C85619 Mus musculus fertilized egg cDNA 3'-end seque... 36 4.3
 gb|AA260277|AA260277 va93g05.r1 Soares mouse 3NME12 5 Mus muscu... 36 4.3
 gb|AA172548|AA172548 mt04g11.r1 Soares mouse 3NbMS Mus musculus... 36 4.3
 gb|AA266879|AA266879 mz96a02.r1 Soares mouse lymph node NbMLN M... 36 4.3
 gb|AA473019|AA473019 vd43e06.r1 Barstead MPLRB1 Mus musculus cD... 36 4.3

gb|R47549|R47549 SW3ICA119SK Brugia malayi infective larva cDNA... 40 0.24
 gb|H32651|H32651 EST107947 Rat PC-12 cells, untreated Rattus sp... 38 0.96
 gb|AA955987|AA955987 UI-R-E1-fb-f-06-0-UI.s1 UI-R-E1 Rattus nor... 38 0.96
 gb|AA819638|AA819638 UI-R-A0-an-f-03-0-UI.s1 UI-R-A0 Rattus nor... 38 0.96
 gb|AI010914|AI010914 EST205365 Normalized rat muscle, Bento Soa... 38 0.96
 gb|AA893199|AA893199 EST197002 Normalized rat kidney, Bento Soa... 38 0.96
 gb|AA945176|AA945176 EST200675 Normalized rat liver, Bento Soar... 38 0.96
 gb|R95272|R95272 SWOvL3CA167SK Onchocerca volvulus infective la... 36 3.8
 gb|AA917208|AA917208 ka05f02.s1 Onchocerca volvulus infective l... 36 3.8
 dbj|C62023|C62023 C.elegans cDNA clone yk249d5 : 5' end, single... 36 3.8
 gb|AI013322|AI013322 EST207997 Normalized rat spleen, Bento Soa... 36 3.8
 gb|AI043280|AI043280 TENU0920 T. cruzi epimastigote normalized ... 36 3.8
 gb|AI009422|AI009422 EST203873 Normalized rat heart, Bento Soar... 36 3.8
 gb|AI012655|AI012655 EST207106 Normalized rat placenta, Bento S... 36 3.8
 dbj|C62878|C62878 C.elegans cDNA clone yk296d4 : 5' end, single... 36 3.8
 gb|AA915818|AA915818 SWOvL3CA1269SK Onchocerca volvulus infecti... 36 3.8
 gb|W00009|W00009 TgESTzy75b07.r1 TgRH Tachyzoite cDNA Toxoplasm... 36 3.8
 gb|AA943503|AA943503 EST199002 Normalized rat brain, Bento Soar... 36 3.8
 gb|AA956933|AA956933 UI-R-E1-fl-b-08-0-UI.s1 UI-R-E1 Rattus nor... 36 3.8
 gb|H54977|H54977 HHU16a Sorghum bicolor cv. TX430 Sorghum bicol... 36 3.8

SEQ ID NO:562

gb|AC000112|HSAC000112 Human PAC clone DJ149P21, complete seque... 44 0.082
 gb|U50197|CELF25E2 Caenorhabditis elegans cosmid F25E2. 44 0.082
 dbj|AB007727|AB007727 Arabidopsis thaliana genomic DNA, chromos... 44 0.082
 gb|U02562|BSU02562 Bacillus subtilis N-acetylglucosaminidase (l... 42 0.32
 dbj|D45048|BACORFX Bacillus subtilis gene for beta-N-acetylgluc... 42 0.32
 emb|Z70683|CEF13B12 Caenorhabditis elegans cosmid F13B12, compl... 40 1.3
 emb|AL023828|CEY17G7B Caenorhabditis elegans cosmid Y17G7B, com... 40 1.3
 gb|U39740|CELZC64 Caenorhabditis elegans cosmid ZC64. 40 1.3
 gb|AF006490|AF006490 Gossypium hirsutum adenine nucleotide tran... 40 1.3
 emb|AL010170|PFSC03098 Plasmodium falciparum DNA *** SEQUENCING... 40 1.3
 gb|U53701|GHU53701 Gossypium hirsutum alcohol dehydrogenase 2d ... 40 1.3

HUMAN ESTs

gb|AA670455|AA670455 ae62h05.s1 Stratagene lung carcinoma 93721... 852 0.0
 gb|AA251062|AA251062 zs07c10.r1 NCI_CGAP GiCB1 Homo sapiens cDNA... 795 0.0

gb|AA669916|AA669916 ag42h08.s1 Jia bone marrow stroma Homo sap... 638 0.0
 gb|AA300058|AA300058 EST12665 Uterus tumor I Homo sapiens cDNA ... 587 e-165
 gb|AA664277|AA664277 ac08c05.s1 Stratagene HeLa cell s3 937216 ... 549 e-154
 gb|AA373224|AA373224 EST85230 HSC172 cells I Homo sapiens cDNA ... 529 e-148
 gb|AA225705|AA225705 nc10b05.r1 NCI_CGAP_Pr1 Homo sapiens cDNA ... 515 e-144
 gb|W27883|W27883 39b10 Human retina cDNA randomly primed sublib... 484 e-134
 gb|R24643|R24643 yh36g05.r1 Homo sapiens cDNA clone 131864 5'. 438 e-121
 gb|N93137|N93137 zb28h06.s1 Homo sapiens cDNA clone 304955 3'. 432 e-119
 gb|AA250933|AA250933 zs07d01.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 426
 e-117
 gb|AA216370|AA216370 nc10b05.s1 NCI_CGAP_Pr1 Homo sapiens cDNA ... 398 e-109
 gb|H26939|H26939 yl64g01.r1 Homo sapiens cDNA clone 163056 5'. 394 e-108
 gb|H30169|H30169 yo58g09.r1 Homo sapiens cDNA clone 182176 5'. 394 e-108
 gb|W38854|W38854 zb28h06.r1 Soares parathyroid tumor NbHPA Homo... 359 5e-97
 gb|AA602297|AA602297 np25a11.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 281 1e-73
 gb|AA167151|AA167151 zp06e09.r1 Stratagene ovarian cancer (#937... 256 6e-66
 gb|AA172387|AA172387 zo99d03.s1 Stratagene ovarian cancer (#937... 234 2e-59
 gb|AA173748|AA173748 zo99d03.r1 Stratagene ovarian cancer (#937... 224 2e-56
 gb|T83979|T83979 yd66a11.s1 Homo sapiens cDNA clone 113180 3'. 220 3e-55
 dbj|D61540|HUM415A08B Human fetal brain cDNA 5'-end GEN-415A08. 194 2e-47
 gb|N45148|N45148 yv25a05.r1 Homo sapiens cDNA clone 243728 5'. 165 2e-38
 gb|AA642960|AA642960 60f07.s1 NCI_CGAP_Lym3 Homo sapiens cDNA... 147 4e-33
 gb|R90980|R90980 yp93a03.r1 Homo sapiens cDNA clone 194956 5' s... 40 0.62
 gb|AA521500|AA521500 aa73h08.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 40 0.62
 gb|H82921|H82921 yq46h10.s1 Homo sapiens cDNA clone 198883 3' s... 40 0.62
 gb|AA294871|AA294871 EST100023 Pancreas tumor I Homo sapiens cD... 38 2.4
 dbj|D63191|HUM503F11B Human placenta cDNA 5'-end GEN-503F11. 38 2.4
 gb|AA211096|AA211096 zq89g01.s1 Stratagene hNT neuron (#937233)... 38 2.4

gb|AA840137|AA840137 ud01e08.r1 Soares mouse uterus NMPu Mus mu... 383 e-104
 gb|AA145994|AA145994 mr13h04.r1 Soares mouse 3NbMS Mus musculus... 345 3e-93
 gb|AA146365|AA146365 mr05d05.r1 Soares mouse 3NbMS Mus musculus... 236 2e-60
 gb|AA203902|AA203902 mu60f02.r1 Soares mouse lymph node NbMLN M... 236 2e-60
 gb|AA204516|AA204516 mu66c10.r1 Soares mouse lymph node NbMLN M... 182 2e-44
 gb|AA137343|AA137343 mq80g08.r1 Stratagene mouse melanoma (#937... 52 6e-05
 gb|AA174717|AA174717 ms67a01.r1 Soares mouse 3NbMS Mus musculus... 48 0.001
 gb|W34073|W34073 ma85d10.r1 Soares mouse p3NMF19.5 Mus musculus... 48 0.001
 gb|AA289493|AA289493 vb36b01.r1 Soares mouse lymph node NbMLN M... 48 0.001
 gb|AA177700|AA177700 mt33e12.r1 Soares mouse 3NbMS Mus musculus... 48 0.001
 gb|AA146021|AA146021 mr13e03.r1 Soares mouse 3NbMS Mus musculus... 48 0.001
 gb|AA155352|AA155352 mn43d09.r1 Beddington mouse embryonic regi... 46 0.004
 gb|AA880874|AA880874 vx33b02.r1 Stratagene mouse lung 937302 Mu... 42 0.056

gb|AA590520|AA590520 vi54b08.r1 Beddington mouse embryonic regi... 38 0.88
 gb|AA596629|AA596629 vm56e06.r1 Stratagene mouse Tcell 937311 M... 38 0.88
 dbj|D76657|MUS75H09 Mouse embryonal carcinoma F9 cell cDNA, 75H09 38 0.88
 gb|AA050336|AA050336 mj12f05.r1 Soares mouse embryo NbME13.5 14... 38 0.88
 gb|AA120196|AA120196 mn35a12.r1 Beddington mouse embryonic regi... 38 0.88
 gb|W85267|W85267 mf42c06.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.5
 gb|AA239372|AA239372 my38f03.r1 Barstead mouse pooled organs MP... 36 3.5
 gb|AA497891|AA497891 vi73c07.r1 Stratagene mouse testis (#93730... 36 3.5
 gb|AA673053|AA673053 vn45e05.r1 Barstead mouse myotubes MPLRB5 ... 36 3.5
 emb|Z36324|MM224 M.musculus mRNA (clone 224) for expressed sequ... 36 3.5
 gb|AI021128|AI021128 ub01f06.r1 Soares mouse mammary gland NbMM... 36 3.5
 gb|AA403424|AA403424 mz56f07.r1 Barstead mouse pooled organs MP... 36 3.5
 gb|W66683|W66683 me23g11.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.5
 gb|AA689022|AA689022 vs02c03.r1 Barstead mouse irradiated colon... 36 3.5
 gb|AA574590|AA574590 vn63h11.r1 Barstead mouse proximal colon M... 36 3.5

dbj|C90696|C90696 Dictyostelium discoideum slug cDNA, clone SSJ634 38 0.78
 gb|AA269052|AA269052 MA1MA052.AA3 S. mansoni adult Lambda Zap S... 38 0.78
 gb|AA998786|AA998786 UI-R-C0-im-e-11-0-UI.s1 UI-R-C0 Rattus nor... 38 0.78
 gb|H33464|H33464 EST109494 Rat PC-12 cells, NGF-treated (9 days... 38 0.78
 gb|AA390721|AA390721 LD09459.5prime LD Drosophila melanogaster ... 36 3.1
 dbj|C83908|C83908 Dictyostelium discoideum slug cDNA, clone SSA567 36 3.1
 gb|AA202425|AA202425 LD02606.5prime LD Drosophila melanogaster ... 36 3.1
 gb|AI030951|AI030951 UI-R-C0-jf-d-04-0-UI.s1 UI-R-C0 Rattus nor... 36 3.1
 gb|N60251|N60251 TgESTzy11d04.r1 TgRH Tachyzoite cDNA Toxoplasm... 36 3.1
 gb|AA246875|AA246875 LD05855.5prime LD Drosophila melanogaster ... 36 3.1
 gb|AA803682|AA803682 GM13955.5prime GM Drosophila melanogaster ... 36 3.1
 gb|AA997528|AA997528 UI-R-C0-hw-h-11-0-UI.s1 UI-R-C0 Rattus nor... 36 3.1
 gb|AA695197|AA695197 GM02389.5prime GM Drosophila melanogaster ... 36 3.1
 gb|AA567339|AA567339 HL01077.5prime HL Drosophila melanogaster ... 36 3.1
 gb|AA950648|AA950648 LD30547.5prime LD Drosophila melanogaster ... 36 3.1

SEQ ID NO:563

substantially identical to D86956

SEQ ID NO:564

gb|AC004505|AC004505 Homo sapiens chromosome 20, P1 clone 86C1 ... 176 1e-41
 gb|S78798|S78798 1-phosphatidylinositol-4-phosphate 5-kinase is... 115 4e-23
 gb|U48696|HSU48696 Human mariner-like element-containing mRNA, ... 115 4e-23
 gb|U66300|LEU66300 Lycopersicon esculentum heat shock protein (... 115 4e-23
 gb|AF045432|AF045432 Danio rerio stem cell leukemia protein (ta... 111 6e-22
 emb|Z97178|BVRNAEF2 Beta vulgaris cDNA for elongation factor 2 107 9e-21
 gb|U39066|MMU39066 Murine MAP kinase kinase 6c mRNA, complete cds. 101 6e-19
 gb|U37573|XXU37573 Shuttle expression vector pBKCMV. 96 4e-17
 gb|AF033097|AF033097 Avena sativa nonphototropic hypocotyl 1 (N... 90 2e-15
 gb|AF027174|AF027174 Arabidopsis thaliana cellulose synthase ca... 86 3e-14
 gb|U65376|CFU65376 Canis familiaris rod photoreceptor transduci... 84 1e-13
 gb|AF033565|AF033565 Mus musculus cdc2/CDC28-like protein kinas... 82 5e-13
 emb|Z49980|HS2AMCP H.sapiens mRNA for ets-like protein (clone 7... 82 5e-13
 emb|AJ001103|LLAR CAB Lactococcus lactis arcA and arcB genes 80 2e-12
 gb|U52868|CFU52868 Canis familiaris retinal cyclic-GMP phosphod... 80 2e-12
 gb|G29058|G29058 chicken STS ADL368 76 3e-11
 gb|G29060|G29060 chicken STS ADL352 76 3e-11
 gb|U34048|HDU34048 Haemophilus ducreyi hemoglobin-binding prote... 76 3e-11
 gb|U44386|SLU44386 Solanum lycopersicum heat shock protein (TFH... 68 8e-09
 gb|S83098|S83098 ribosomal protein S3 [Ambystoma mexicanum=Mexi... 66 3e-08
 gb|U48697|HSU48697 Human mariner-like element-containing mRNA, ... 60 2e-06
 gb|AF033096|AF033096 Avena sativa nonphototropic hypocotyl 1 (N... 60 2e-06
 emb|X99051|LLATTMSAT L.lagopus ATT microsatellite, locus LLST1 58 8e-06
 gb|U41811|HAU41811 Homarus americanus beta-1 tubulin mRNA, comp... 46 0.029
 emb|X99055|LLCAMSAT1 L.lagopus CA microsatellite, locus LLSD5 44 0.12
 emb|X65215|BTMISATN B.taurus microsatellite DNA (624bp) 44 0.12
 gb|AE001023|AE001023 Archaeoglobus fulgidus section 84 of 172 o... 42 0.46
 emb|X80164|HSPDCM4 H.salinarium phage dcm4 Virus DNA 42 0.46
 emb|X87859|MTCMAJ12S C.major mitochondrial gene for 12S ribosom... 42 0.46
 emb|X87861|MTCPAL12S C.pallidus mitochondrial gene for 12S ribo... 42 0.46
 gb|L13767|STMSEC101A Streptomyces lividans sec101 gene, 5' end p... 42 0.46
 emb|Y08962|OSTRAMBPR O.sativa mRNA for transmembrane protein >g... 40 1.8
 gb|S65686|S65686 {multiple cloning sites, vector} [bacteriophag... 40 1.8
 gb|J02871|HUMCP45IV Human lung cytochrome P450 (IV subfamily) B... 40 1.8
 dbj|D10450|HUMRTVE Human genomic DNA, retrovirus-like element 40 1.8
 gb|S65683|S65683 {multiple cloning sites, vector} [bacteriophag... 40 1.8
 gb|L14950|PIGALDRED Sus scrofa aldose reductase mRNA, complete ... 40 1.8
 gb|S65693|S65693 {multiple cloning sites, vector} [bacteriophag... 40 1.8
 gb|S65694|S65694 {multiple cloning sites, vector} [bacteriophag... 40 1.8
 emb|AJ223292|SPAJ3292 Streptococcus pyogenes SOD gene, complete... 40 1.8
 gb|U25846|HAU25846 Homarus americanus clone LOB5 farnesoic acid... 40 1.8
 emb|X16699|HSP450P2 Human mRNA for cytochrome P-450HP 40 1.8
 gb|U37100|HSU37100 Homo sapiens aldose reductase-like peptide m... 40 1.8

HUMAN ESTs

gb|AA305996|AA305996 EST177003 Jurkat T-cells VI Homo sapiens c... 942 0.0
 gb|AA975279|AA975279 oq36e08.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 900 0.0
 gb|AA426359|AA426359 zw11b02.r1 Soares NhHMPu S1 Homo sapiens c... 868 0.0
 gb|AA424296|AA424296 zv90b08.r1 Soares NhHMPu S1 Homo sapiens c... 749 0.0
 gb|AA632259|AA632259 np67d04.s1 NCI_CGAP_Br2 Homo sapiens cDNA ... 730 0.0
 gb|H80377|H80377 yu59e01.r1 Homo sapiens cDNA clone 230424 5'. 658 0.0
 gb|AA515175|AA515175 ng68f10.s1 NCI_CGAP_Lip2 Homo sapiens cDNA... 615 e-174
 gb|AA351770|AA351770 EST59616 Infant brain Homo sapiens cDNA 5'... 611 e-172
 gb|AA426522|AA426522 zw11b02.s1 Soares NhHMPu S1 Homo sapiens c... 587 e-165
 gb|AA676220|AA676220 zi22a12.s1 Soares fetal liver spleen 1NFLS... 585 e-165
 gb|R35132|R35132 yg60e09.r1 Homo sapiens cDNA clone 36874 5'. 579 e-163
 gb|H80280|H80280 yu59e01.s1 Homo sapiens cDNA clone 230424 3'. 579 e-163
 gb|H81145|H81145 yu60e01.r1 Homo sapiens cDNA clone 230520 5'. 561 e-157
 gb|AA311105|AA311105 EST18187 Heart I Homo sapiens cDNA 5' end 533 e-149
 gb|AA380530|AA380530 EST93691 Supt cells Homo sapiens cDNA 5' end 527 e-147
 gb|H81050|H81050 yu60e01.s1 Homo sapiens cDNA clone 230520 3'. 500 e-139
 gb|AA460005|AA460005 zx49g07.s1 Soares testis NHT Homo sapiens ... 482 e-134
 gb|AA076450|AA076450 zm91d12.r1 Stratagene ovarian cancer (#937... 466 e-129
 gb|N43873|N43873 yy43e09.r1 Homo sapiens cDNA clone 274024 5'. 452 e-125
 gb|AA076451|AA076451 zm91d12.s1 Stratagene ovarian cancer (#937... 418 e-115
 gb|AA907095|AA907095 ol03b12.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ... 414 e-113
 gb|W01027|W01027 za56g07.r1 Soares fetal liver spleen 1NFLS Hom... 262 1e-67
 gb|AA127183|AA127183 zn29d11.r1 Stratagene neuroepithelium NT2R... 222 1e-55
 gb|H65491|H65491 yr56a08.s1 Homo sapiens cDNA clone 209270 3'. 222 1e-55
 gb|N48543|N48543 yy49d08.r1 Homo sapiens cDNA clone 276879 5'. 210 4e-52
 gb|R32579|R32579 yh54h06.r1 Homo sapiens cDNA clone 133595 5'. 194 2e-47
 gb|AA247827|AA247827 j0778.seq.F Human fetal heart, Lambda ZAP ... 117 5e-24
 N84048, (many others similar, but smaller)

gb|AA589598|AA589598 vl49d08.s1 Stratagene mouse skin (#937313)... 398 e-109
 gb|AA647465|AA647465 vq82f02.s1 Knowles Solter mouse 2 cell Mus... 385 e-105
 gb|AA510284|AA510284 vh58f02.r1 Soares mouse mammary gland NbMM... 345 4e-93
 gb|AA028696|AA028696 mi12e12.r1 Soares mouse p3NMF19.5 Mus musc... 307 9e-82
 gb|N28081|N28081 MDB1409R Mouse brain, Stratagene Mus musculus ... 244 1e-62
 gb|AA177452|AA177452 mt24c12.r1 Soares mouse 3NbMS Mus musculus... 226 3e-57
 gb|N28080|N28080 MDB1409 Mouse brain, Stratagene Mus musculus c... 226 3e-57
 dbj|C88310|C88310 Mus musculus fertilized egg cDNA 3'-end seque... 226 3e-57
 gb|AA763786|AA763786 vo99g12.r1 Soares mouse mammary gland NbMM... 94 2e-17
 gb|AA667535|AA667535 vv18b12.r1 Stratagene mouse heart (#937316... 40 0.31
 gb|AA208274|AA208274 mv96a01.r1 GuayWoodford Beier mouse kidney... 38 1.2

gb|AA444814|AA444814 vg50e04.r1 Soares mouse mammary gland NbMM... 38 1.2
 gb|AA763341|AA763341 vw53b12.r1 Soares mouse mammary gland NMLM... 38 1.2
 gb|AA110827|AA110827 mp57a12.r1 Soares 2NbMT Mus musculus cDNA ... 38 1.2
 gb|AA691932|AA691932 vt06b04.r1 Barstead mouse myotubes MPLRB5 ... 38 1.2
 gb|W77233|W77233 me61f11.r1 Soares mouse embryo NbME13.5 14.5 M... 38 1.2
 gb|AA072872|AA072872 mm80g08.r1 Stratagene mouse embryonic carc... 38 1.2
 gb|AA980630|AA980630 ua43f05.r1 Soares mouse mammary gland NbMM... 36 4.9
 gb|AA065522|AA065522 ml54d09.r1 Stratagene mouse testis (#93730... 36 4.9
 gb|AA982398|AA982398 uh07b08.r1 Soares mouse hypothalamus NMHy ... 36 4.9
 gb|W62610|W62610 md58c06.r1 Soares mouse embryo NbME13.5 14.5 M... 36 4.9
 gb|AA286651|AA286651 vb79b02.r1 Soares mouse 3NME12 5 Mus muscu... 36 4.9
 gb|AA399772|AA399772 vd70g05.r1 Bedington mouse embryonic regi... 36 4.9
 gb|AA510475|AA510475 vg32h08.r1 Soares mouse mammary gland NbMM... 36 4.9
 gb|AA109064|AA109064 ml63g02.r1 Stratagene mouse testis (#93730... 36 4.9
 gb|AA033485|AA033485 mi42c08.r1 Soares mouse embryo NbME13.5 14... 36 4.9
 gb|W57221|W57221 md59g10.r1 Soares mouse embryo NbME13.5 14.5 M... 36 4.9
 gb|AA467106|AA467106 vd98b04.r1 Soares mouse NbMH Mus musculus ... 36 4.9
 gb|W97470|W97470 mf95a11.r1 Soares mouse embryo NbME13.5 14.5 M... 36 4.9
 gb|AA606917|AA606917 vm91c05.r1 Knowles Solter mouse blastocyst... 36 4.9
 dbj|C78330|C78330 Mus musculus 3.5-dpc blastocyst cDNA 3'-end s... 36 4.9
 gb|AA013753|AA013753 mh26h12.r1 Soares mouse placenta 4NbMP13.5... 36 4.9
 gb|AA145240|AA145240 mr12a03.r1 Soares mouse 3NbMS Mus musculus... 36 4.9
 gb|AA245533|AA245533 mx03c11.r1 Soares mouse NML Mus musculus c... 36 4.9
 gb|AA770893|AA770893 vt13a08.r1 Barstead mouse myotubes MPLRB5 ... 36 4.9
 dbj|C79987|C79987 Mus musculus 3.5-dpc blastocyst cDNA 3'-end s... 36 4.9
 gb|AA014027|AA014027 mh24a12.r1 Soares mouse placenta 4NbMP13.5... 36 4.9
 dbj|C89051|C89051 Mus musculus early blastocyst cDNA, clone 01B... 36 4.9
 gb|AA058308|AA058308 mj59e09.r1 Soares mouse embryo NbME13.5 14... 36 4.9
 gb|AA673826|AA673826 vu08h10.r1 Barstead mouse myotubes MPLRB5 ... 36 4.9
 gb|AA637080|AA637080 vn07h04.r1 Knowles Solter mouse blastocyst... 36 4.9
 gb|W44292|W44292 mc80c07.r1 Soares mouse embryo NbME13.5 14.5 M... 36 4.9

gb|AA955972|AA955972 UI-R-E1-ff-d-10-0-UI.s1 UI-R-E1 Rattus nor... 159 4e-37
 gb|AA957275|AA957275 UI-R-E1-fq-f-08-0-UI.s1 UI-R-E1 Rattus nor... 157 2e-36
 emb|Z84031|SSZ84031 S.scrofa mRNA; expressed sequence tag (5'; ... 111 9e-23
 gb|AF041408|AF041408 Fragaria x ananassa clone FA110b 96 5e-18
 gb|AA933116|AA933116 SWBmL3SA048T3 Brugia malayi L3 subtracted ... 58 1e-06
 gb|AA933363|AA933363 SWBmL3SA615T3 Brugia malayi L3 subtracted ... 52 7e-05
 gb|AA660164|AA660164 00001 MtRHE Medicago truncatula cDNA 5' si... 50 3e-04
 gb|N37420|N37420 18647 Lambda-PRL2 Arabidopsis thaliana cDNA cl... 44 0.018
 gb|H35981|H35981 14503 Lambda-PRL2 Arabidopsis thaliana cDNA cl... 44 0.018
 gb|AA882627|AA882627 TENS0198 T. cruzi epimastigote normalized ... 44 0.018
 gb|AI026481|AI026481 TENU0693 T. cruzi epimastigote normalized ... 42 0.070
 gb|AA946369|AA946369 EST201868 Normalized rat lung, Bento Soare... 42 0.070

gb|AI010371|AI010371 EST204822 Normalized rat lung, Bento Soare... 42 0.070
 gb|AI010257|AI010257 EST204708 Normalized rat lung, Bento Soare... 42 0.070
 dbj|D39318|RICR3325A Rice cDNA, partial sequence (R3325_1A). 40 0.28
 gb|U40140|OSU40140 Oryza sativa clone pFDRRC22 mRNA sequence. 40 0.28
 gb|AI009132|AI009132 EST203583 Normalized rat embryo, Bento Soa... 40 0.28
 dbj|D47291|RICKS12574A Rice cDNA, partial sequence (S12574_1A). 40 0.28
 dbj|D47316|RICKS12613A Rice cDNA, partial sequence (S12613_1A). 40 0.28
 gb|T42265|T42265 5528 Lambda-PRL2 Arabidopsis thaliana cDNA clo... 40 0.28
 dbj|D47631|RICKS13239A Rice cDNA, partial sequence (S13239_1A). 40 0.28
 gb|AI013513|AI013513 EST208188 Normalized rat spleen, Bento Soa... 40 0.28
 gb|AA751980|AA751980 96AS0896 Rice Immature Seed Lambda ZAPII c... 40 0.28
 gb|AA660165|AA660165 00002 MtRHE Medicago truncatula cDNA 5' si... 40 0.28
 emb|Z34868|ATTS3597 A. thaliana transcribed sequence; clone FAF... 40 0.28
 dbj|D39131|RICKR2302A Rice cDNA, partial sequence (R2302_1A). 40 0.28
 gb|AA963968|AA963968 UI-R-C0-gs-b-05-0-UI.s1 UI-R-C0 Rattus nor... 40 0.28
 gb|AA866346|AA866346 UI-R-A0-bm-a-05-0-UI.s1 UI-R-A0 Rattus nor... 40 0.28
 gb|AI044437|AI044437 UI-R-C1-js-e-06-0-UI.s1 UI-R-C1 Rattus nor... 40 0.28
 dbj|D41811|RICKS4634A Rice cDNA, partial sequence (S4634_1A). 40 0.28
 dbj|C19261|C19261 Rice cDNA, partial sequence (E10176_1A) 40 0.28
 dbj|D48409|RICKS14588A Rice cDNA, partial sequence (S14588_1A). 40 0.28
 dbj|C26556|C26556 Rice cDNA, partial sequence (C12586_1A) 40 0.28
 dbj|D47831|RICKS13548A Rice cDNA, partial sequence (S13548_1A). 40 0.28
 dbj|C72152|C72152 Rice cDNA, partial sequence (E1094_3A) 40 0.28
 dbj|D46553|RICKS11305A Rice cDNA, partial sequence (S11305_2A). 40 0.28
 gb|AI028926|AI0289 (and many others of similar score)

SEQ ID NO:565

emb|X68308|OOLPLIP O.ovis mRNA for lipoprotein lipase 40 1.2
 gb|AE000660|HUAЕ000660 Homo sapiens T-cell receptor alpha delta... 40 1.2
 emb|AL022333|HS474I12 Human DNA sequence *** SEQUENCING IN PROG... 38 4.6
 emb|Z12618|CFTRG C.fasciculata gene encoding trypanothione redu... 38 4.6
 gb|M81651|HUMSEMIIB Human semenogelin II (SEMGII) gene, complet... 38 4.6
 gb|M96980|HUMMMYT1A Homo sapiens myelin transcription factor 1 (... 38 4.6
 gb|U89688|ACU89688 Acanthamoeba castellanii myosin-I binding pr... 38 4.6
 gb|AC002497|AC002497 Human Cosmid g1940a142 from 7q31.3, comple... 38 4.6
 gb|M81652|HUMSMNGLN Homo sapiens semenogelin II mRNA, complete ... 38 4.6
 gb|M25665|HUMNCF1A Human neutrophil cytosol factor 1 (NCF-47k) ... 38 4.6
 gb|M73325|TRFTRPREDC Crithidia fasciculata trypanothione reduct... 38 4.6
 gb|M73324|TRFTRPREDB Crithidia fasciculata trypanothione reduct... 38 4.6
 emb|X92589|MMSEMIIGN M.mulatta semenogelin II gene 38 4.6
 emb|Z47556|HSSG1SG2 H.sapiens genes for semenogelin I and semen... 38 4.6
 gb|AC004753|AC004753 Homo sapiens chromosome 16, cosmid clone R... 38 4.6
 gb|M55067|HUMNADPHO Human 47-kD autosomal chronic granulomatous... 38 4.6

gb|M73323|TRFTRPREDA Crithidia fasciculata trypanothione reduct... 38 4.6

HUMAN ESTs

gb|R11942|R11942 yf54c05.r1 Homo sapiens cDNA clone 25950 5'. 656 0.0
gb|AA366384|AA366384 EST77326 Pancreas tumor III Homo sapiens c... 470 e-130
gb|T12566|T12566 CHR90086 Homo sapiens genomic clone P94_24 5' ... 133 5e-29
gb|R37032|R37032 yf54c05.s1 Homo sapiens cDNA clone 25950 3'. 44 0.036
gb|AA661650|AA661650 nv02h12.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA261982|AA261982 zs20d03.r1 NCI_CGAP_GCB1 Homo sapiens cDNA... 38 2.2
gb|AA588219|AA588219 no24c11.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA250891|AA250891 zs06c06.r1 NCI_CGAP_GCB1 Homo sapiens cDNA... 38 2.2
gb|AA244177|AA244177 nc05a02.r1 NCI_CGAP_Pr1 Homo sapiens cDNA ... 38 2.2
gb|AA715147|AA715147 nv10d05.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA659887|AA659887 nv03a10.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA627890|AA627890 nq70a08.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA603596|AA603596 np27b11.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA613738|AA613738 np25h09.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA715248|AA715248 nv10h06.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AI038487|AI038487 ow25d12.x1 Soares_parathyroid_tumor_NbHPA ... 38 2.2
gb|AA252786|AA252786 zs26f10.r1 NCI_CGAP_GCB1 Homo sapiens cDNA... 38 2.2
gb|AA287819|AA287819 zs50h04.r1 NCI_CGAP_GCB1 Homo sapiens cDNA... 38 2.2
gb|AA564176|AA564176 nj04c08.s1 NCI_CGAP_Pr21 Homo sapiens cDNA... 38 2.2
gb|AA643870|AA643870 np26h07.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA280371|AA280371 zt05f07.r1 NCI_CGAP_GCB1 Homo sapiens cDNA... 38 2.2
gb|R00687|R00687 ye78h08.r1 Homo sapiens cDNA clone 123903 5' s... 38 2.2
gb|AA587820|AA587820 nj06h05.s1 NCI_CGAP_Pr21 Homo sapiens cDNA... 38 2.2
gb|AA588443|AA588443 no22c11.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA568385|AA568385 nl88f06.s1 NCI_CGAP_Co10 Homo sapiens cDNA... 38 2.2
gb|AA281831|AA281831 zt06c08.r1 NCI_CGAP_GCB1 Homo sapiens cDNA... 38 2.2
gb|AA700438|AA700438 zj74b08.s1 Soares fetal liver spleen 1NFLS... 38 2.2
gb|AA689530|AA689530 ns66e07.r1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA688300|AA688300 nv14a09.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA687962|AA687962 nv13h04.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA526586|AA526586 ni96f11.s1 NCI_CGAP_Pr21 Homo sapiens cDNA... 38 2.2
gb|AA642589|AA642589 nq73f04.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA541594|AA541594 ni89g07.s1 NCI_CGAP_Pr21 Homo sapiens cDNA... 38 2.2
gb|AA278713|AA278713 zs76h02.r1 NCI_CGAP_GCB1 Homo sapiens cDNA... 38 2.2
gb|T58661|T58661 ya94a07.r1 Homo sapiens cDNA clone 69300 5' si... 38 2.2
gb|AA689473|AA689473 ns66e07.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA459023|AA459023 aa26a09.r1 NCI_CGAP_GCB1 Homo sapiens cDNA... 38 2.2

dbj|C76752|C76752 *Mus musculus* 3.5-dpc blastocyst cDNA 3'-end s... 60 2e-07
gb|AA123048|AA123048 mn32g01.r1 Beddington mouse embryonic regi... 36 3.2
gb|AA616529|AA616529 vo10e01.r1 Barstead mouse myotubes MPLRB5 ... 36 3.2
gb|AA254370|AA254370 va13h09.r1 Soares mouse lymph node NbMLN M... 36 3.2
gb|AA537288|AA537288 vk46c04.r1 Soares mouse mammary gland NbMM... 36 3.2
gb|AA462365|AA462365 vg74c05.r1 Soares mouse NbMH *Mus musculus* ... 36 3.2
gb|AA589462|AA589462 vl47g07.s1 Stratagene mouse skin (#937313)... 36 3.2
gb|AA968017|AA968017 uh06h10.r1 Soares mouse hypothalamus NMHy ... 36 3.2

dbj|C93868|C93868 *Dictyostelium discoideum* slug cDNA, clone SSL809 36 2.8
gb|AA531984|AA531984 TgESTzz46b06.r1 TgME49 invivo Bradyzoite c... 36 2.8
gb|N60418|N60418 TgESTzy07a10.r1 TgRH Tachyzoite cDNA Toxoplasm... 36 2.8
gb|H32045|H32045 EST106774 Rat PC-12 cells, untreated Rattus sp... 36 2.8
gb|AA956789|AA956789 UI-R-E1-fr-h-01-0-UI.s1 UI-R-E1 Rattus nor... 36 2.8
gb|H33275|H33275 EST109117 Rat PC-12 cells, NGF-treated (9 days... 36 2.8
gb|AA531938|AA531938 TgESTzz45b08.r1 TgME49 invivo Bradyzoite c... 36 2.8
dbj|D41507|RICS4044A Rice cDNA, partial sequence (S4044_1A). 36 2.8
gb|AA799411|AA799411 EST188908 Normalized rat heart, Bento Soar... 36 2.8
gb|AA519671|AA519671 TgESTzz27c10.r1 TgME49 invivo Bradyzoite c... 36 2.8
dbj|D40678|RICS2786A Rice cDNA, partial sequence (S2786_1A). 36 2.8
gb|AA012430|AA012430 TgESTzz22b12.r1 TgME49cDNA Toxoplasma gond... 36 2.8
dbj|D40551|RICS2612A Rice cDNA, partial sequence (S2612_1A). 36 2.8
gb|AI008452|AI008452 EST202903 Normalized rat embryo, Bento Soa... 36 2.8
dbj|D41253|RICS3620A Rice cDNA, partial sequence (S3620_1A). 36 2.8
gb|AA923843|AA923843 UI-R-A1-dr-f-04-0-UI.s1 UI-R-A1 Rattus nor... 36 2.8
gb|AA799410|AA799410 EST188907 Normalized rat heart, Bento Soar... 36 2.8

We claim:

1. A method of diagnosing a disorder characterized by expression of a human cancer associated antigen precursor coded for by a nucleic acid molecule, comprising:
 - contacting a biological sample isolated from a subject with an agent that specifically binds to the nucleic acid molecule, an expression product thereof, or a fragment of an expression product thereof complexed with an HLA molecule, wherein the nucleic acid molecule is a NA Group 1 nucleic acid molecule, and
 - determining the interaction between the agent and the nucleic acid molecule or the expression product as a determination of the disorder.
- 10 2. The method of claim 1, wherein the agent is selected from the group consisting of
 - (a) a nucleotide acid molecule comprising NA group 1 nucleic acid molecules or a fragment thereof,
 - (b) a nucleic acid molecule comprising NA group 3 nucleic acid molecules or a fragment thereof,
 - 20 (c) a nucleic acid molecule comprising NA group 17 nucleic acid molecules or a fragment thereof,
 - (d) an antibody that binds to an expression product of NA group 1 nucleic acids,
 - 30 (e) an antibody that binds to an expression product of NA group 3 nucleic acids.

(f)

an antibody that binds to an expression product of NA group 17 nucleic acids,

5

(g)

and agent that binds to a complex of an HLA molecule and a fragment of an expression product of a NA group 1 nucleic acid,

10

(h)

an agent that binds to a complex of an HLA molecule and a fragment of an expression product of a NA group 3 nucleic acid, and

15

(I)

an agent that binds to a complex of an HLA molecule and a fragment of an expression product of a NA group 17 nucleic acid.

3. The method of claim 1, wherein the disorder is characterized by expression of a plurality of human cancer associated antigen precursors and wherein the agent is a plurality of agents, each of which is specific for a different human cancer associated antigen precursor, and wherein said plurality of agents is at least 2, at least 3, at least 4, at least 4, at least 6, at least 7, or at least 8, at least 9 or at least 10 such agents.

25 4.

The method of claims 1-3, wherein the agent is specific for a human cancer associated antigen precursor that is a breast, a gastric, a lung, a prostate, a renal or a colon cancer associated antigen precursor.

5. A method for determining regression, progression or onset of a condition 30 characterized by expression of abnormal levels of a protein encoded by a nucleic acid molecule that is a NA Group 1 molecule, comprising

monitoring a sample, from a patient who has or is suspected of having the condition, for a parameter selected from the group consisting of

5 (I)

the protein,

(ii)

a peptide derived from the protein,

10 (iii)

an antibody which selectively binds the protein or peptide, and

(iv)

cytolytic T cells specific for a complex of the peptide derived from the

15 protein and an MHC molecule,

as a determination of regression, progression or onset of said condition.

6.

The method of claim 5, wherein the sample is a body fluid, a body effusion or a tissue.

20

7.

The method of claim 5, wherein the step of monitoring comprises contacting the sample with a detectable agent selected from the group consisting of

25 (a)

an antibody which selectively binds the protein of (I), or the peptide of (ii),

(b)

a protein or peptide which binds the antibody of (iii), and

30 (c)

a cell which presents the complex of the peptide and MHC molecule of
(iv).

5

8. The method of claim 7, wherein the antibody, the protein, the peptide or
the cell is labeled with a radioactive label or an enzyme.

9. The method of claim 5, comprising assaying the sample for the peptide.

10

10. The method of claim 5, wherein the nucleic acid molecule is a NA Group
3 molecule.

11. The method of claim 5, wherein the nucleic acid molecule is a NA Group
15 11 molecule.

12. The method of claim 5, wherein the nucleic acid molecule is a NA Group
12 molecule.

20 13. The method of claim 5, wherein the nucleic acid molecule is a NA Group
13 molecule.

14. The method of claim 5, wherein the nucleic acid molecule is a NA Group
25 14 molecule.

15. The method of claim 5, wherein the nucleic acid molecule is a NA Group
15 molecule.

16. The method of claim 5, wherein the nucleic acid molecule is a NA Group
30 16 molecule.

17. The method of claim 5, wherein the protein is a plurality of proteins, the parameter is a plurality of parameters, each of the plurality of parameters being specific for a different of the plurality of proteins.

5 18. A pharmaceutical preparation for a human subject comprising an agent which when administered to the subject enriches selectively the presence of complexes of an HLA molecule and a human cancer associated antigen, and a pharmaceutically acceptable carrier, wherein the human cancer associated antigen is a fragment of a human cancer associated antigen precursor encoded by a
10 nucleic acid molecule comprises a NA Group 1 molecule.

19. The pharmaceutical preparation of claim 18, wherein the agent comprises a plurality of agents, each of which enriches selectively in the subject complexes of an HLA molecule and a different human cancer associated antigen.

15 20. The pharmaceutical preparation of claim 19, wherein the plurality is at least two, at least three, at least four or at least 5 different such agents.

21. The pharmaceutical preparation of claim 18, wherein the nucleic acid
20 molecule is a NA Group 3 nucleic acid molecule.

22. The pharmaceutical preparation of claim 18, wherein the agent is selected from the group consisting of

- (1) an isolated polypeptide comprising the human cancer associated antigen, or a functional variant thereof,
- (2) an isolated nucleic acid operably linked to a promoter for expressing the isolated polypeptide, or functional variant thereof,
- (3) a host cell expressing the isolated polypeptide, or functional variant thereof, and

(4) isolated complexes of the polypeptide, or functional variant thereof, and an HLA molecule.

23. The pharmaceutical preparation of claims 18-22, further comprising an
5 adjvant.

24. The pharmaceutical preparation of claim 18, wherein the agent is a cell expressing an isolated polypeptide comprising the human cancer associated antigen or a functional variant thereof, and wherein the cell is nonproliferative.

10

25. The pharmaceutical preparation of claim 18, wherein the agent is a cell expressing an isolated polypeptide comprising the human cancer associated antigen or a functional variant thereof, and wherein the cell expresses an HLA molecule that binds the polypeptide.

15

26. The pharmaceutical preparation of claim 18, wherein the agent is at least two, at least three, at least four or at least five different polypeptides, each coding for a different human cancer associated antigen or functional variant thereof.

20

27. The pharmaceutical preparation of claim 18, wherein the agent is a PP Group 2 polypeptide.

28. The pharmaceutical preparation of claim 18, wherein the agent is a PP Group 3 polypeptide or a PP Group 4 polypeptide.

25

29. The pharmaceutical preparation of claim 25, wherein the cell expresses one or both of the polypeptide and HLA molecule recombinantly.

30

30. The pharmaceutical preparation of claim 25, wherein the cell is nonproliferative.

31. A composition comprising
an isolated agent that binds selectively a PP Group 1 polypeptide.
32. The composition of matter of claim 31, wherein the agent binds selectively
5 a PP Group 3 polypeptide.
33. The composition of matter of claim 31, wherein the agent binds selectively
a PP Group 11 polypeptide.
- 10 34. The composition of matter of claim 31, wherein the agent binds selectively
a PP Group 12 polypeptide.
35. The composition of matter of claim 31, wherein the agent binds selectively
a PP Group 13 polypeptide.
- 15 36. The composition of matter of claim 31, wherein the agent binds selectively
a PP Group 14 polypeptide.
37. The composition of matter of claim 31, wherein the agent binds selectively
20 a PP Group 15 polypeptide.
38. The composition of matter of claim 31, wherein the agent binds selectively
a PP Group 16 polypeptide.
- 25 39. The composition of claims 31-38, wherein the agent is a plurality of
different agents that bind selectively at least two, at least three, at least four, or at least five
different such polypeptides.
40. The composition of claims 31-38, wherein the agent is an antibody.

41. The composition of claim 39, wherein the agent is an antibody.
42. A composition of matter comprising
a conjugate of the agent of claims 31-41 and a therapeutic or diagnostic
5 agent.
43. The composition of matter of claim 42, wherein the conjugate is of the
agent and a therapeutic or diagnostic that is a toxin.
- 10 44. A pharmaceutical composition comprising an isolated nucleic acid
molecule selected from the group consisting of:
(1)
NA Group 1 molecules, and
- 15 (2)
NA Group 2 molecules, and a pharmaceutically acceptable carrier.
45. The pharmaceutical composition of claim 44, wherein the isolated nucleic
acid molecule comprises a NA Group 3 or NA Group 4 molecule.
- 20 46. The pharmaceutical composition of claim 44, wherein the isolated nucleic
acid molecule comprises at least two isolated nucleic acid molecules coding for two different
polypeptides, each polypeptide comprising a different human cancer associated antigen.
- 25 47. The pharmaceutical composition of claims 44-46 further comprising an
expression vector with a promoter operably linked to the isolated nucleic acid molecule.
48. The pharmaceutical composition of claims 44-46 further comprising a host
cell recombinantly expressing the isolated nucleic acid molecule.

49. A pharmaceutical composition comprising
an isolated polypeptide comprising a PP Group 1 or a PP Group 2
polypeptide, and
a pharmaceutically acceptable carrier.

5

50. The pharmaceutical composition of claim 49, wherein the isolated
polypeptide comprises a PP Group 3 or a PP Group 4 polypeptide.

10 51. The pharmaceutical composition of claim 49, wherein the isolated
polypeptide comprises at least two different polypeptides, each comprising a different human
cancer associated antigen.

15 52. The pharmaceutical composition of claim 49, wherein the isolated
polypeptides are PP Group 11 polypeptides or HLA binding fragments thereof.

53. The pharmaceutical composition of claim 49, wherein the isolated
polypeptides are PP
Group 12 polypeptides or HLA binding fragments thereof.

20

54. The pharmaceutical composition of claim 49, wherein the isolated
polypeptides are PP Group 13 polypeptides or HLA binding fragments thereof.

25 55. The pharmaceutical composition of claim 49, wherein the isolated
polypeptides are PP Group 14 polypeptides or HLA binding fragments thereof.

56. The pharmaceutical composition of claim 49, wherein the isolated
polypeptides are PP Group 15 polypeptides or HLA binding fragments thereof.

30

57. The pharmaceutical composition of claim 49, wherein the isolated polypeptides are PP Group 16 polypeptides or HLA binding fragments thereof.

58. The pharmaceutical composition of claims 49-57, further comprising an
5 adjvant.

59. An isolated nucleic acid molecule comprising a NA Group 3 molecule.

60. An isolated nucleic acid molecule comprising a NA Group 4 molecule.

10 61. The isolated nucleic acid molecule of claims 59-60, wherein the molecule
is a Group 11 molecule or a fragment thereof.

15 62. The isolated nucleic acid molecule of claims 59-60, wherein the molecule
is a Group 12 molecule or a fragment thereof.

63. The isolated nucleic acid molecule of claims 59-60, wherein the molecule
is a Group 13 molecule or a fragment thereof.

20 64. The isolated nucleic acid molecule of claims 59-60, wherein the molecule
is a Group 14 molecule or a fragment thereof.

65. The isolated nucleic acid molecule of claims 59-60, wherein the molecule
is a Group 15 molecule or a fragment thereof.

25 66. The isolated nucleic acid molecule of claims 59-60, wherein the molecule
is a Group 16 molecule or a fragment thereof.

67. An isolated nucleic acid molecule selected from the group consisting of

(a)

a fragment of a nucleic acid selected from the group of nucleic acid consisting of SEQ ID NOs presenting nucleic acid sequences among SEQ ID NOs. 1-816, of sufficient length to represent a sequence unique within the human genome, and identifying a nucleic acid encoding a human cancer associated antigen precursor,

(b)

complements of (a),

10

provided that the fragment includes a sequence of contiguous nucleotides which is not identical to any sequence selected from the sequence group consisting of

(1) sequences having the GenBank accession numbers of Table 1

(correct?),

15

(2) complements of (1), and

(3) fragments of (1) and (2).

68. The isolated nucleic acid molecule of claim 67, wherein the sequence of contiguous nucleotides is selected from the group consisting of:

20

(1)

at least two contiguous nucleotides nonidentical to the sequence group,

(2)

at least three contiguous nucleotides nonidentical to the sequence group,

(3)

25

at least four contiguous nucleotides nonidentical to the sequence group,

(4)

at least five contiguous nucleotides nonidentical to the sequence group,

(5)

30

at least six contiguous nucleotides nonidentical to the sequence group.

(6)

at least seven contiguous nucleotides nonidentical to the sequence group.

69. The isolated nucleic acid molecule of claim 67, wherein the fragment has a size selected from the group consisting of at least: 8 nucleotides, 10 nucleotides, 12 nucleotides, 14 nucleotides, 16 nucleotides, 18 nucleotides, 20 nucleotides, 22 nucleotides, 24 nucleotides, 26 nucleotides, 28 nucleotides, 30 nucleotides, 50 nucleotides, 75 nucleotides, 100 nucleotides, and 200 nucleotides.
- 10 70. The isolated nucleic acid molecule of claim 67, wherein the molecule encodes a polypeptide which, or a fragment of which, binds a human HLA receptor or a human antibody.
- 15 71. An expression vector comprising an isolated nucleic acid molecule of claims 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69 or 70 operably linked to a promoter.
72. An expression vector comprising a nucleic acid operably linked to a promoter, wherein the nucleic acid is a NA Group 2 molecule.
- 20 73. An expression vector comprising a NA Group 1 or Group 2 molecule and a nucleic acid encoding an HLA molecule.
74. A host cell transformed or transfected with an expression vector of claims 71, 72, or 73.
- 25 75. A host cell transformed or transfected with an expression vector of claim 71 or claim 72 and further comprising a nucleic acid encoding HLA.
76. An isolated polypeptide encoded by the isolated nucleic acid molecule of claims 59, 60, 61, 62, 63, 64, 65, or 66.

77. A fragment of the polypeptide of claim 76 which is immunogenic.

78. The fragment of claim 77, wherein the fragment, or a portion of the fragment, binds HLA or a human antibody.

5

79. An isolated fragment of a human cancer associated antigen precursor which, or portion of which, binds HLA or a human antibody, wherein the precursor is encoded by a nucleic acid molecule that is a NA Group 1 molecule.

10 80. The fragment of claim 79, wherein the fragment is part of a complex with HLA.

81. The fragment of claim 79, wherein the fragment is between 8 and 12 amino acids in length.

15

82. An isolated polypeptide comprising a fragment of the polypeptide of claim 76 of sufficient length to represent a sequence unique within the human genome and identifying a polypeptide that is a human cancer associated antigen precursor.

20 83. A kit for detecting the presence of the expression of a human cancer associated antigen precursor comprising

a pair of isolated nucleic acid molecules each of which consists essentially of a molecule selected from the group consisting of

25 (a) a 12-32 nucleotide contiguous segment of the nucleotide sequence of any of the NA Group 1 molecules and

(b) complements of ("a"), wherein the contiguous segments are nonoverlapping.

30

84. The kit of claim 83, wherein the pair of isolated nucleic acid molecules is constructed and arranged to selectively amplify an isolated nucleic acid molecule that is a NA Group 3 molecule.

5 85. A method for treating a subject with a disorder characterized by expression of a human cancer associated antigen precursor, comprising administering to the subject an amount of an agent, which enriches selectively in the subject the presence of complexes of an HLA molecule and a human cancer associated antigen, effective to ameliorate the disorder, wherein the human cancer associated antigen is a fragment of a human cancer associated antigen precursor encoded by a nucleic acid molecule selected from the group consisting of

(a)

a nucleic acid molecule comprising NA group 1 nucleic acid molecules.

15

(b)

a nucleic acid molecule comprising NA group 3 nucleic acid molecules,

(c)

20 a nucleic acid molecule comprising NA group 17 nucleic acid molecules.

86. The method of claim 85, wherein the disorder is characterized by expression of a plurality of human cancer associated antigen precursors and wherein the agent is a plurality of agents, each of which enriches selectively in the subject the presence of complexes 25 of an HLA molecule and a different human cancer associated antigen.

87. The method of claim 86, wherein the plurality is at least 2, at least 3, at least 4, or at least 5 such agents.

88. The method of claims 85-87, wherein the agent is an isolated polypeptide selected from the group consisting of PP Group 1, PP Group 2, PP Group 3, PP Group 4, PP Group 5, PP Group 6, PP Group 7, PP Group 8, PP Group 9, PP Group 10, PP Group 11, PP Group 12, PP Group 13, PP Group 14, PP Group 15, PP Group 16 and PP Group 17
5 polypeptides.
89. The method of claims 85-88, wherein the disorder is cancer.
90. A method for treating a subject having a condition characterized by
10 expression of a human cancer associated antigen precursor in cells of the subject, comprising:
- 15 (I) removing an immunoreactive cell containing sample from the subject,
- (ii) contacting the immunoreactive cell containing sample to the host cell under conditions favoring production of cytolytic T cells against a human cancer associated antigen which is a fragment of the precursor,
- 20 (iii) introducing the cytolytic T cells to the subject in an amount effective to lyse cells which express the human cancer associated antigen, wherein the host cell is transformed or transfected with an expression vector comprising an isolated nucleic acid molecule operably linked to a promoter, the isolated nucleic acid molecule being selected from the group of nucleic acid molecules consisting of NA Group 1, NA Group 2, NA Group 3, NA Group 4, NA Group 5, NA Group 6, NA Group 7, NA Group 8, NA Group 9, NA Group 10, NA Group 11, NA Group 12, NA Group 13, NA Group 14, NA Group 15, NA Group 16, and NA Group 17.

91. The method of claim 90, wherein the host cell recombinantly expresses an HLA molecule which binds the human cancer associated antigen.

92. The method of claim 90, wherein the host cell endogenously expresses an HLA molecule which binds the human cancer associated antigen.

93. A method for treating a subject having a condition characterized by expression of a human cancer associated antigen precursor in cells of the subject, comprising:

10 (I) identifying a nucleic acid molecule expressed by the cells associated with said condition, wherein said nucleic acid molecule is a NA Group 1 molecule

15 (ii) transfecting a host cell with a nucleic acid selected from the group consisting of

20 (a) the nucleic acid molecule identified,

25 (b) a fragment of the nucleic acid identified which includes a segment coding for a human cancer associated antigen,

30 (c) deletions, substitutions or additions to (a) or (b), and

(d)

degenerates of (a), (b), or (c);

(iii)

5 culturing said transfected host cells to express the transfected nucleic acid molecule, and;

(iv)

introducing an amount of said host cells or an extract thereof to the subject 10 effective to increase an immune response against the cells of the subject associated with the condition.

94. The method of claim 93, further comprising:

15

(a)

identifying an MHC molecule which presents a portion of an expression product of the nucleic acid molecule,

20 wherein the host cell expresses the same MHC molecule as identified in (a) and wherein the host cell presents an MHC binding portion of the expression product of the nucleic acid molecule.

25 95. The method of claim 93, wherein the immune response comprises a B-cell response or a T cell response.

96. The method of claim 95, wherein the response is a T-cell response which comprises generation of cytolytic T-cells specific for the host cells presenting the portion of the expression product of the nucleic acid molecule or cells of the subject expressing the human 30 cancer associated antigen.

97. The method of claim 93, wherein the nucleic acid molecule is a NA Group 3 molecule.

98. The method of claims 93 or 94, further comprising treating the host cells 5 to render them non-proliferative.

99. A method for treating or diagnosing or monitoring a subject having a condition characterized by expression of an abnormal amount of a protein encoded by a nucleic acid molecule that is a NA Group 1 molecule, comprising
10 administering to the subject an antibody which specifically binds to the protein or a peptide derived therefrom, the antibody being coupled to a therapeutically useful agent, in an amount effective to treat the condition.

100. The method of claim 99, wherein the antibody is a monoclonal antibody.
15

101. The method of claim 100, wherein the monoclonal antibody is a chimeric antibody or a humanized antibody.

102. A method for treating a condition characterized by expression in a subject 20 of abnormal amounts of a protein encoded by a nucleic acid molecule that is a NA Group 1 nucleic acid molecule, comprising
administering to a subject a pharmaceutical composition of any one of claims 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 25 55, 56, 47, and 58 in an amount effective to prevent, delay the onset of, or inhibit the condition in the subject.

103. The method of claim 102, wherein the condition is cancer.

104. The method of claims 102-103, further comprising first identifying that 30 the subject expresses in a tissue abnormal amounts of the protein.

105. A method for treating a subject having a condition characterized by expression of abnormal amounts of a protein encoded by a nucleic acid molecule that is a NA Group 1 nucleic acid molecule, comprising

- 5 (I) identifying cells from the subject which express abnormal amounts of the protein;
- (ii) isolating a sample of the cells;
- (iii) cultivating the cells, and
- (iv) introducing the cells to the subject in an amount effective to provoke an immune response against the cells.

10

106. The method of claim 105, wherein the cells express a protein selected from the group

consisting of a PP Group 11 protein, a PP Group 12 protein, a PP Group 13 protein, PP Group 14 protein, a PP Group 15 protein and a PP Group 16 protein.

15

107. The method of claim 105, further comprising rendering the cells non-proliferative, prior to introducing them to the subject.

108. A method for treating a pathological cell condition characterized by
20 aberrant expression of a protein encoded by a nucleic acid molecule that is a NA Group 1 nucleic acid molecule, comprising

administering to a subject in need thereof an effective amount of an agent which inhibits the expression or activity of the protein.

25 109. The method of claim 108, wherein the agent is an inhibiting antibody which selectively binds to the protein and wherein the antibody is a monoclonal antibody, a chimeric antibody or a humanized antibody.

110. The method of claim 108, wherein the agent is an antisense nucleic acid
30 molecule which selectively binds to the nucleic acid molecule which encodes the protein.

111. The method of claim 108, wherein the nucleic acid molecule is a NA Group 3 nucleic acid molecule.

112. A composition of matter useful in stimulating an immune response to a plurality of a protein encoded by nucleic acid molecules that are NA Group 1 molecules, comprising

a plurality of peptides derived from the amino acid sequences of the proteins, wherein the peptides bind to one or more MHC molecules presented on the surface of the cells which express an abnormal amount of the protein.

10

113. The composition of matter of claim 112, wherein at least a portion of the plurality of peptides bind to MHC molecules and elicit a cytolytic response thereto.

15

114. The composition of matter of claim 113, further comprising an adjuvant.

115. The composition of matter of claim 114, wherein said adjuvant is a saponin, GM-CSF, or an interleukin.

20

116. An isolated antibody which selectively binds to a complex of:

(i)

a peptide derived from a protein encoded by a nucleic acid molecule that is a NA Group 1 molecule and

25 (ii)

and an MHC molecule to which binds the peptide to form the complex, wherein the isolated antibody does not bind to (i) or (ii) alone.

30

117. The antibody of claim 116, wherein the antibody is a monoclonal antibody, a chimeric antibody or a humanized antibody.

1/9

NY-LU-12	KEESSPPPKVNVPLIGLCEYGGDSDYEEEEEEQTPPPQPRTAQQPKREEQTKKENEDDKLTDMNKLAICLLCRRQFPNKEVL	970
LUCA15	PELVRINGDEENPLKRGGLVAAYSGDSDNEE.....ELVERLESEEKLADWKKMACILLCRRQFPNKDAL	662
DXS8237E	DLPKLIASSDRPSPPRGLVAAAYSGESDSEE.....EQERGGPEREEKLTDWQKLACILLCRRQFPSPSKEAL	233
NY-LU-12	IKHQQLSDLPKQNLIEHRKTQSEQELAYLERERE.GEFKGRGNDRREKIQSFDSPERKRKIKYSRETDS..DRKLVDKEDID	1050
LUCA15	VRHQQLSDLHKQNMIDYRRSRLSEQEALELERRERE.MKYRDRAAERREKYGIPPEPPKRKQFDAGTV..NYEQPTKDGID	742
DXS8237E	IRHQQLSGLHKGQNLIEHRRRAHLSENEALEKNDMEQMKYRDRAAERREKYGIPPEPPKRRKYYGGISTASVDFEQPTRDGLG	316
NY-LU-12	TSSKGCCVQQATGWRKGTCGTGLGYGHPGLASSEEAEGRMRGCPGSVGASGRTSKRSNETYRDAVRRVMFARYKELD	1123
LUCA15	HSNIGNKMLQAMGWREGSGLGRKCQGITAPIEAQVRLKGAGLGAKGSAYGLSGADSYKDAVRKAMFARFIEME	815
DXS8237E	SDNIGSRMLQAMGWKEGSGLGRKKGQGIVTPIEAQTRVRGSGLARGSSYGVTTSESYKETLHKTMVTRFNEAQ	389

Fig. 1

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334 TTTGAGCATTAGAAACAAAGAGAAGGAGAACACAAGGTGTAGCCTTGTGACATGAGTCAGCAGACTTCCAGCAGACTTCAAAGCCAAGTCAGTCAGACC 1200
 F E H S E T R K G E T G G V A F E H E S P A D F Q N S Q S P V Q D

 367 AAGATAAGTCACAGCCTTCTGGACCGTGAAGAGCAGAGGTCAAGATGGTCTGGTTAAAGAAGAAGGGGGCTGGACTTCTGGCTTGGCAAGAACCGGA 1300
 Q D K S Q L S G R K K Q S S D A G L F K E E G G L D F A G R Q D T D

 401 TTACAGAAGCATGGAGTACCGTGTGATGTGCCAGGAAGCCAGATGTTGGCTATGCCAGAGGCAAGTCTTCCAGAGGGCAAAACTGCC 1400
 Y R S N F Y R D V D H R L P G S Q N F G Y G Q S K S F P E G K T A

 434 CGAGATGCCAACGGCACCTTCAGGATCAAAGTGGACCCAAAGTGAGGAAACCCAGGAGTATTGATTAACTGAGATGCTGAGATG 1500
 R D A Q R D L Q D Q D T R T G P S E K K P S R L I R L S G V P K D

 467 CCACAAAAGAAGGATTCTTAATGCTTCTGATGGACTCTCTGATGGCATGCCTGTAAGAACGACTTGCAGTTGAAGGGTATAACACAGGTACGACTATGGCTA 1600
 A T K E E I R N A F R T P D G M P V K R L Q L K E Y N T G Y D Y G Y

 501 TCTCTGGTGGAGTTTCACTCTGGAGATGCCATCGGATGCATCAGGCCAACCGGAAACTCTAATGATCAGGACAAAGTTACCCCTGGACTAT 1700
 V C V E F S L L E D A I G C M E A N Q G T L H I Q D K E V T L E Y

 534 GTATCAAGCAAGMATAATAACCTACCGATGTAAGGAAACATTCAGCCTCAGGACCATGGAAAACACGCTTCTGTTCATTCTGCAAGAACCAAGGAGACAG 1800
 V S S L D F W Y C K R C K A N I G G H R S S C S F C K N P R E V T

 567 AGGCCAAGCAAGMATAATAACCTACCGACCATGGAAAACATCCATACCGACCATGGAAAACACGCTTCTGTTCATTCTGCAAGAACCCCTAACGGCTGATAA 1900
 E A K Q E L I T Y P Q P Q K T S I P A P L E K Q P N Q P L R P A D K

 601 GGAACCTGAACCCAGGAAGGGAAAGAGGCCAAGAGTCAAGCTTAGGACATCAAAAGAGAGAAGGCAAAAGGTATCTGCTCCTCTGAGGGAAAGGG 2000
 E P E P R K R E E G Q E S R L G H Q K R E A E R Y L P P S R R E G

 634 CCAACTTCCGAAGAGACCCGAGAGGGAGGTCACTGGTCTGGAGGACACGCCAGGATGGAGAGGAAACTATCATGCTAAAGGCTATCTATCGTTCCA 2100
 P T F R R D R F R E S W N G E T R Q D G E S K T I M L K R I Y R S

 667 CACCACCTGGGTGATAGTGGAAAGTGGCTTACTACTGGCAACGGTCCGTATCATCAAGAACAGAACAGGCCCTATGGGGCATAC 2200
 T P P E V I V E V L E P Y V R L T T A N V R I I K N R T G P M G H T

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Fig. 2 (CONTINUED)

701	Y G F I D L D S H V E A L R V V K I L Q N L D P P F S I D G K M V	CTATGGCTTATTGACCTCGACTCCCATGTGAAGATCTTACAGAACCTTGATCCGCCATTAGCATTGGAAGATGGTA 2300
734	A V N L A T G K R R N D S G D H S D H M H Y Y Q G K K Y F R D R R	GCTGTAAACCTGGCACTGGAAACGAAATGATTCGCCCCACATTCTGACCACATGCATTACTATCAGGGTAAAGATAATTTCGGATAGGAGGG 2400
767	G G G R N S D W S S D T N R Q G Q S S D C Y I Y D S A S G Y Y Y	GAGGTGGCAGAAATTAGACTGGCTTCAGATACAAATCGACAAGGACAACAGTCATCATCTGAGTGCTACATATATGATTCTGCTAGTGGCTACTATTA 2500
801	D P L A G T Y D P N T Q Q E V Y V P Q D P G L P E E I E E L	VGACCCCTFGGCAGGAACCTTATTATGACCCAAATACCCAGCAAGAAGCTATGTGCCGCCAGGATCCCTGGATTACCTGAGGAAGAGATCAAGGAGMA 2600
834	K P T S Q G K S S K K E M S K R D G K E K K D R G V T R F Q E N	AAACCCACCGTCAAGGAAAGTCAGTAGCAAGAAGGAAATGTCTAAAGAGATGGCAAGGAGAAAAAGACAGGAGTACGAGGTTTCAGGAAAATC 2700
867	A S E G K A P A E D V F L K P L F P T V K K E E S P P K V V H I	CCAGTGAAGGGAAAGGCCCTGCAGAACACGTCTTAAAGAACCCCTCCTACTGTGAAGGAAGAGAGACTGCTTAACTGAGTGGTAAACC 2800
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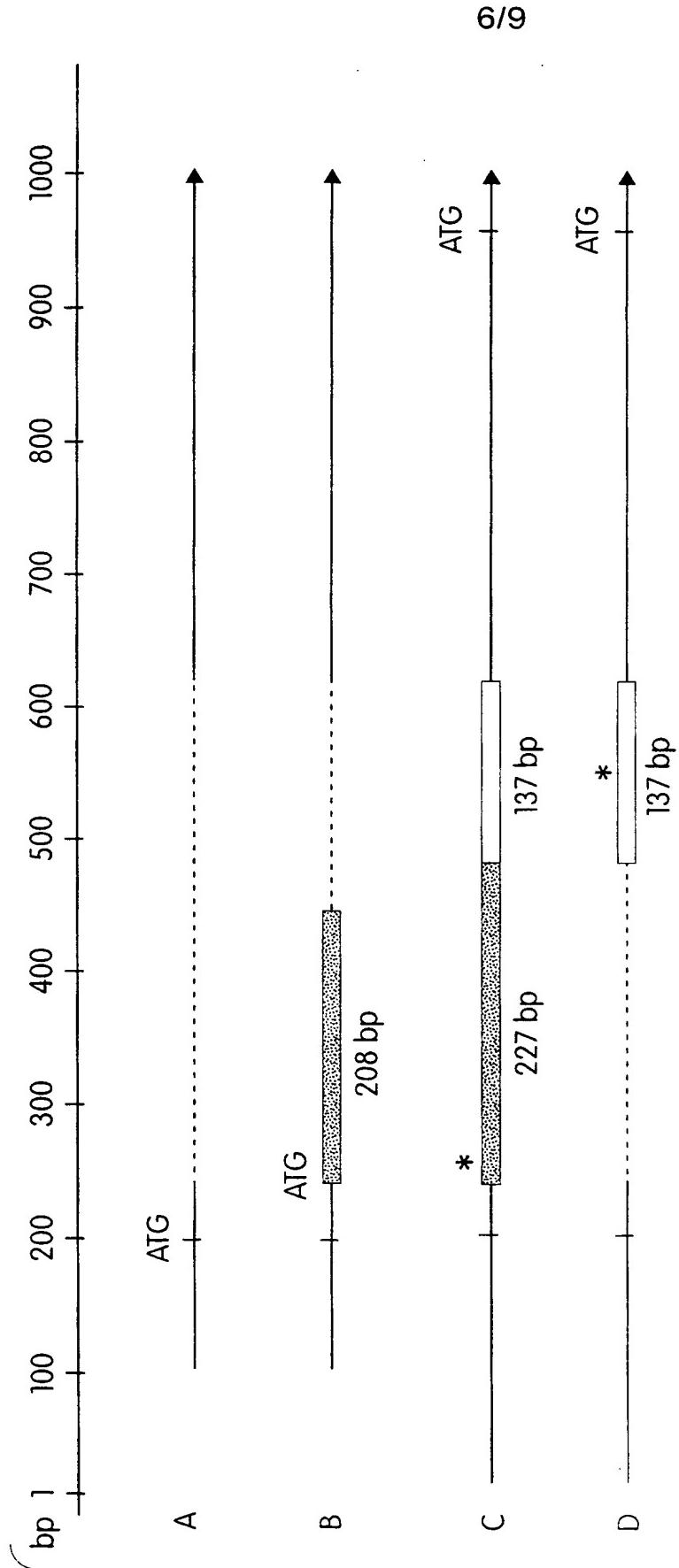
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3599

Fig. 2 (CONTINUED)



TRANSCRIPT VARIANT B

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 G₁
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 C₃
 A₄
 G₅
 T₆
 C₇
 T₈
 A₉
 T₁₀
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Fig. 3A

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227bp exon:
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137bp exon:
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Fig. 3B

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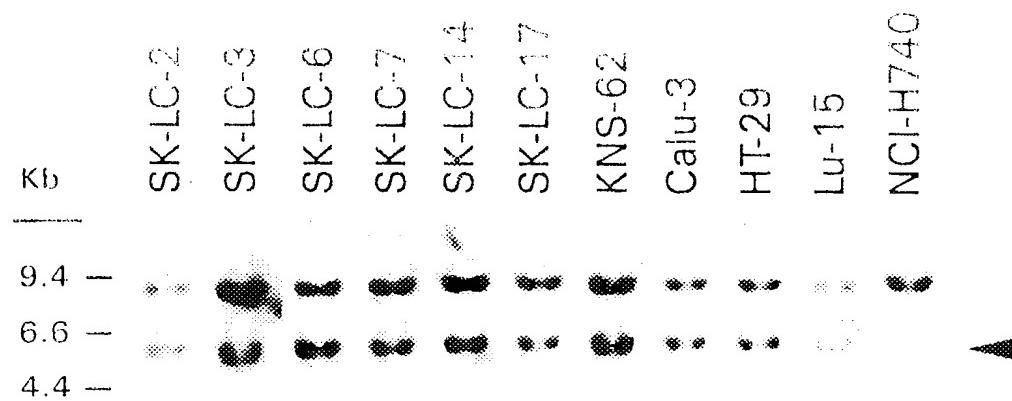


Fig. 4

SUBSTITUTE SHEET (RULE 26)

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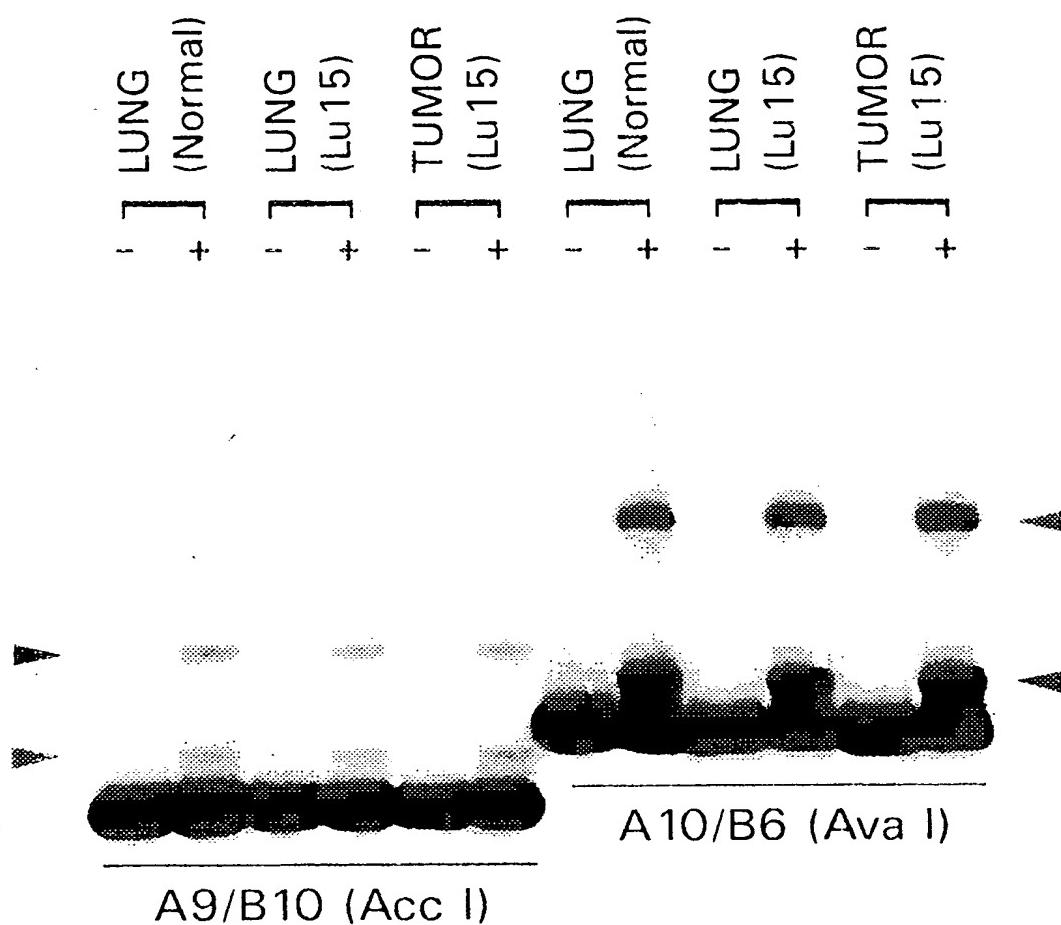


Fig. 5

SUBSTITUTE SHEET (RULE 26)

SEQUENCE LISTING

<110> Ludwig Institute for Cancer Research
Old, Lloyd J.
Scanlan, Matthew J.
Stockert, Elisabeth
Gure, Ali
Chen, Yao-Tseng
Gout, Ivan
O'Hare, Michael
Obata, Yuichi
Pfreundschuh, Michael
Tureci, Ozlem
Sahin, Ugur

<120> CANCER-ASSOCIATED NUCLEIC ACIDS AND
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<211> 1148

<212> DNA

<213> Homo Sapiens

<400> 15

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<211> 1113
<212> DNA
<213> Homo Sapiens
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<212> DNA  
<213> Homo Sapiens
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<210> 18
<211> 1145
<212> DNA
<213> Homo Sapiens

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<210> 19
<211> 1106
<212> DNA
<213> Homo Sapiens

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<212> DNA
<213> Homo Sapiens

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<210> 21
<211> 355
<212> DNA
<213> Homo Sapiens

<400> 21
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<210> 22
<211> 1070
<212> DNA
<213> Homo Sapiens

<400> 22
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<210> 23

<211> 861
 <212> DNA
 <213> Homo Sapiens

<400> 23

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<210> 24
 <211> 985
 <212> DNA
 <213> Homo Sapiens

<400> 24

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<210> 25
 <211> 545
 <212> DNA
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<400> 25

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<210> 26
<211> 374
<212> DNA
<213> Homo Sapiens

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<211> 552
<212> DNA
<213> Homo Sapiens

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<212> DNA
<213> Homo Sapiens

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<210> 29

<211> 537
 <212> DNA
 <213> Homo Sapiens

<400> 29

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<210> 30
 <211> 3872
 <212> DNA
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<400> 30

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 aanttctggc tgcaatccct ccccgccccca cantgcccc catttgagta caccgcacaa 3780
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<210> 31
<211> 655
<212> DNA
<213> Homo Sapiens

<400> 31
 gaaatcatgg gagcacaaag aagaataag tgaagcagag ccaggggggtg gttccttggg 60
 agatggagg ccggcagagg aaagtgccttca tgaatgtatg gaggaggaag agaaatccc 120
 aaaacctaag tctgtgggtt caccgcagg tgctcttcaag aaagagcatg taaatgtatg 180
 attcattggg cacgtanatg ctggcaagtc aaccattggg ggacaaaataa tgtatggac 240
 tggatgggtt gacaaaagga cgcttggaaaa gatatggaaaga gaagctaaag agaaaaacag 300
 agaaaacttgg tacttgtctt gggcctttaga cacaatcaag gaagaacggag acaagggtaa 360
 aacagttagaa gtgggtcggtg cctatggtaa accggaaaag aacatttcac aattcttagat 420
 atgaatccca gaacactgag ctcaaaaaccc aaagccccaga atttgaagct caaagttcn 480
 aattccanga aggtgcggag atgctctga accccgagga aaagatccctt tgaatatctc 540
 cgtaggagtt cacccttgcg actccttcac tcaggggtttt ggggagcacc cacaggggac 600
 ctgcccatacg ggccacccctt tgagatgcccc acaggggcccc tgctgtctac accgc 655

<210> 32
<211> 466
<212> DNA
<213> Homo Sapiens

<400> 32

gaaagggtggc	cagaggaagg	gacagctgac	ctggcacaat	ctgggcttga	agggggcaca	60
acaagagcgt	ctgtgagctg	gtgctgtctg	gagggatctt	ggctcctctc	cggctatctg	120
accttcctga	agacactgctc	gcacactgca	tcccttgca	tcagttccag	ctcggtccga	180
attcgccacg	actctgtgcc	gaattcggca	cgagggaagc	actactccc	gctgtggcc	240
caggaggacc	tgctggagga	gcagaaggat	ggggccccggg	cagcggctgt	ggctgacaag	300
aagaaaggcc	tcatggggcc	actgaccgaa	ctggacacta	aagatgtgga	tgcctgctg	360
aagaagtctg	aggcccagca	tgaacagccg	gaagatggat	gccccttgg	tgcctgacg	420
cagcgctcc	tgcaggccct	ggtggaggaa	aatattattt	tttccc		466

<210> 33
<211> 293
<212> DNA
<213> Homo Sapiens

<400> 33

gtcggggccc	tacatgagaa	gcatgatgca	gtcgctgagc	cagaatccag	atttggctgc	60
acagatgatg	ctgaatagcc	cgctgtttac	tgcaaattct	cagctgcagg	agcagatgcg	120
gccacagctc	ccagccttcc	tgcagcagat	gcagaatcca	gacacactat	cagccatgtc	180
aaacccaaga	gcaatgcagg	cttaatgca	gatccagcag	gggctacaga	cattagccac	240
tgaagcacct	ggcctgattc	cgagcttcac	tccaggtgt	gggtgggggn	tct	293

<210> 34
<211> 456
<212> DNA
<213> Homo Sapiens

<400> 34

caaaggccta	agtcaagagcc	tgctagaatg	tgtccagggt	tacagctata	ctgcacagca	60
cttcccatgc	tagtctctgt	aaaacgcaaa	aagccatttt	caggagcagt	aggcaagtca	120
cattcaattg	aaatgcagga	tggtgactg	ccattccaa	ttccatcttc	ctggcagatc	180
agcacagggt	tccccagaag	ttcatatcct	ggattacagg	tgtatgaaac	catggtagcca	240
tacagaaagt	tttatgatgt	tgttagcagga	gactccttgc	tattttccca	ggtttttagcc	300
actgctccca	aatgataagg	agggtgagga	gtcacatatg	gaacttccat	catgtcgct	360
tcttgctcaa	aatatccctg	gtcatcttg	agtttagtac	agtctccaaa	atctatata	420
ggagggaggc	cacagtctat	tggcataccca	aatttt			456

<210> 35
<211> 679
<212> DNA
<213> Homo Sapiens

<400> 35

ggcggcggttc	gtgtccgagg	tcactagttt	cccggtagtt	cagctgcaca	tgaatagaac	60
agcaatgaga	gccagtcaga	aggactttga	aaattcaata	aatcaagtga	aactcttga	120
aaaggatcca	gaaaacgaag	tgaagctaaa	actctacgca	ctatataagc	aggccactga	180
aggaccttgt	aacatgcccc	aaccagggt	atttgacttg	atcaacaagg	ccaaatggga	240
cgcatggaat	gcccttggca	gcctgccccaa	ggaagctgcc	aggcagaact	atgtggattt	300
ggtgtccagt	ttgagtcctt	cattggaaatc	ctctagtcag	gtggagcctg	gaacagacag	360
gaaatcaact	gggtttgaaa	ctctgggtgt	gacctccgaa	gatggcatca	caaagatcat	420
gttcaacccg	cccaaaaaaga	aaaatgccat	aaacactgag	atgtatcatg	aaattatgcg	480
tgcacttaaa	gctgccagca	aggatgactc	aatcatca	gttttaacag	gaaatggtga	540
ctattacagt	agtggaaatg	atctgactaa	cttcactgat	atccccctg	gtggagtna	600
ggagaaaagct	aaaaataatg	ccgttttact	gaagggaaatt	tgtggctgt	tttatagaat	660
ttccctaagcc	tctgattgc					679

<210> 36
 <211> 689
 <212> DNA
 <213> Homo Sapiens

<400> 36
 ctaaacccgt ggacatatca ggccatggc cacgaactac taggcataaa caacaatcg 60
 attgatctt ccagagtgcc gggaaatcagt aaagacttaa gagaagtggc cctatctgct 120
 gaaaatgatg aattctatgc taataatatg tacctgaact ttgcttagat tggtagcaat 180
 ataaagaatc tcataggaga ttttcagaag aagaaaccaa aagaacagca aaaactagaa 240
 tcaatagcag acatgaaggc gtttggtag aattatccac agttcaagaa aatgtctggg 300
 actgtttcaa agcatgtgac agtggttgg aactgtctc gattggtag tgaacggaa 360
 ctgctggagg tttcagaggt tgagcaagaa ctggcctgtc aaaatgacca ttctagtgt 420
 ctccagaata taaaaaggct tctgcagaac cccaaagtga cagagttga tgctgcccgc 480
 ctggtgatgc tttatgctt acattatgag cgacacagca gcaatagcct gccaggacta 540
 atgatggncc tcaggaataa aggtgtttct gagaagtatc gaaagctgt gtctgcagtt 600
 gttgaatatg gtgtaaaaac gagtcagagg aagtgcaccc ctcagcccc aagatgctgt 660
 tggctatcac caaacaattc ctcaaaagg 689

<210> 37
 <211> 443
 <212> DNA
 <213> Homo Sapiens

<400> 37
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 tttattcctt ccgggtgggtt cgcggcttag ctgaccaaga acggaaactgg ggactttcgc 120
 agtgagagtt acagctctta aagatggcac cgaccaggc cggcgcggt ggctcaggcc 180
 tgcaatccca gcactttggg aggcggaggg aggtgaatca cgaggtcagg aaatcgagac 240
 catcctggct aacatggtga aacccgtct ccactaaaaa tacaaaaaat tagccaggca 300
 tggtggtgg cacctgttagt cccagctact tgggaggctg agccaggaaa gtggcatgaa 360
 cccgcgaggc agagcttgca ataaggcgag atcgtgccaa tgcactccag cctggcaac 420
 agaaggagac actgtctcaa aaa 443

<210> 38
 <211> 442
 <212> DNA
 <213> Homo Sapiens

<400> 38
 ctcgcctcgg agcagccatg atggaaggcc tggacgacgg cccggacttc ctctcagaag 60
 aggaccgcgg acttaaagca ataaatgtat atcttcaaag tggatgtgt ctgcaggtgg 120
 acatttctga tgctcttagt gagcgggata aagtaaaatt cactgttccac acaaagattc 180
 caccacgacc accaagaccc gatttgtat cttcaaggaa aaaactacag aagcttggg 240
 aaggagaagg gtcaatgacg aaggaagaat tcacaaagat gaaacaggaa ctggaaagctg 300
 aatatttggc aatattcaag aagacagttt cgtatgtat gatgttccctg tgcgtgtgg 360
 cagcacatcc tattttgaga agagattaa atttccatgt ctcttggaa tataatcaag 420
 atttgagtgt gcgaggaaaa aa 442

<210> 39
 <211> 692
 <212> DNA
 <213> Homo Sapiens

<400> 39

caggcacagg ccctatctta tattttttc catcttcatc atccacttct gcttacagtt	60
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cagtgtggtt ctgtctaacc aaagggcatt ggcccaaacc cctgcatttg gtttagggc	180
taacagagct cctcagataa tcttcacaca catgtaaactg ctggagatct tattctatta	240
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ataacccagc ttcccttt ggcttttagc ccattcagac ttgccagag tcaagccaag	360
gattgcttt ttgctacagt ttctgccaa atggcttagt tcctgagtagt ctggaaacca	420
gagagaaaaga ggtccagga ttagtggta tgaggaggcc tggcttatct aggaagtct	480
gtctgggtt cttattgctg ctccatacag ctgtacgtca gccccttggc cttctctgt	540
ggttcttggc ancaatgagc agcttcact caagtgacac aagtaattac ttagtcctaa	600
tttgatagcc accaactgta cctgggtang caaagtcaaa ttggagaa ncttttcct	660
gatttgaagt tttaattacc ttaattcct tt	692

<210> 40
<211> 619
<212> DNA
<213> Homo Sapiens

<400> 40	
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ccccctgttg tgagttagag caatggctg gagctcccac cctcagcagc atctgatgag	120
ccacttcagg agccactgga ggctgacagg acctcgaaag agctgacaga gccaaagacc	180
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acctcatctt cagccacttc ctcgccttgc ggtccttac ctcgccttgc tgcctcggt	300
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ctggtgccgc ggcggccggca gcagcgggaa gctgccaanc accctagtgc ctgggttctc	480
tgagactagt gcccagccgg gaagccgtc tgcctgcagc atgtcanggc canaatcc	540
ccctcccatt ggtggccctt gtgaaagctg ctccatc cncactgcnc actccanccc	600
agnagccctt cattgcncg	619

<210> 41
<211> 153
<212> PRT
<213> Homo Sapiens

<400> 41	
Pro Glu Ser Lys Pro Ile Met Thr Ser Ser Glu Ala Phe Glu Pro Pro	
1 5 10 15	
Lys Tyr Leu Met Leu Gly Gln Gln Ala Val Gly Gly Val Pro Ile Gln	
20 25 30	
Pro Ser Val Arg Thr Gln Met Trp Leu Thr Glu Gln Leu Arg Thr Asn	
35 40 45	
Pro Leu Glu Gly Arg Asn Thr Glu Asp Ser Tyr Ser Leu Ala Pro Trp	
50 55 60	
Gln Gln Gln Ile Glu Phe Arg Gln Gly Ser Glu Thr Pro Met Gln	
65 70 75 80	
Val Leu Thr Gly Ser Ser Arg Gln Ser Tyr Ser Pro Gly Tyr Gln Asp	
85 90 95	
Phe Ser Lys Trp Glu Ser Met Leu Lys Lys Glu Gly Leu Leu Arg Gln	
100 105 110	
Lys Glu Ile Val Asp Arg Gln Lys Gln Ile Thr His Leu Ile Arg Asp	
115 120 125	
Asn Glu Leu Pro Ala His Ala Met Leu Glu His Tyr Val Asn Cys Glu	
130 135 140	

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Asp Ser Tyr Val Ala Ser Leu His His
 145 150

<210> 42
 <211> 95
 <212> PRT
 <213> Homo Sapiens

<400> 42
 Ile Leu Leu Glu Phe Tyr Leu Trp Gln Ile Gly Arg Tyr Ile Phe Val
 1 5 10 15
 His Val Asn Asn His Ile Tyr Ile Lys Leu Tyr Asn Cys Thr Phe Leu
 20 25 30
 Thr Ala Leu Ser Gln Val Ala Leu Ser Phe Pro Ser Ile Asn Gly Leu
 35 40 45
 Ile Phe Val Ser Phe Ala Phe Phe Arg Val Val Asn Ser Tyr Cys Pro
 50 55 60
 Leu Gln Phe Val Gln Phe Leu Arg Cys Leu Leu Leu Lys Arg Met
 65 70 75 80
 Leu Gly Glu Phe Ile Phe His Lys Glu Met Glu His Tyr Leu Lys
 85 90 95

<210> 43
 <211> 114
 <212> PRT
 <213> Homo Sapiens

<400> 43
 Ser Lys Leu Leu Leu Ser Gly Thr Ala Asp Gly Ala Asp Leu Arg Thr
 1 5 10 15
 Val Asp Pro Glu Thr Gln Ala Arg Leu Glu Ala Leu Glu Ala Ala
 20 25 30
 Gly Ile Gly Lys Leu Ser Thr Ala Asp Gly Lys Ala Phe Ala Asp Pro
 35 40 45
 Glu Val Leu Arg Arg Leu Thr Ser Ser Val Ser Cys Ala Leu Asp Glu
 50 55 60
 Ala Ala Ala Leu Thr Arg Met Arg Ala Glu Ser Thr Ala Asn Ala Gly
 65 70 75 80
 Gln Ser Asp Asn Arg Ser Leu Ala Glu Ala Cys Ser Gly Asp Val Ala
 85 90 95
 Val Arg Lys Leu Leu Ile Glu Gly Arg Ser Val Phe Glu Leu Pro Glu
 100 105 110
 Glu Gly

<210> 44
 <211> 132
 <212> PRT
 <213> Homo Sapiens

<400> 44
 Gly Glu Lys Glu Gln Asp Lys Pro Pro Asn Leu Val Leu Lys Asp Lys
 1 5 10 15
 Val Lys Pro Lys Gln Asp Thr Lys Tyr Asp Leu Ile Leu Asp Glu Gln
 20 25 30

Ala Glu Asp Ser Lys Ser Ser His Ser His Thr Ser Lys His Lys Lys
 35 40 45
 Lys Thr His His Cys Ser Glu Glu Lys Glu Asp Glu Asp Tyr Met Pro
 50 55 60
 Ile Lys Asn Thr Asn Gln Asp Ile Tyr Arg Glu Met Gly Phe Gly His
 65 70 75 80
 Tyr Glu Glu Glu Ser Cys Trp Glu Lys Gln Lys Ser Glu Lys Arg
 85 90 95
 Asp Arg Thr Gln Asn Arg Ser Arg Ser Arg Glu Arg Asp Gly
 100 105 110
 His Tyr Ser Asn Ser His Lys Ser Lys Tyr Gln Thr Asp Leu Tyr Glu
 115 120 125
 Arg Glu Arg Ser
 130

<210> 45
 <211> 214
 <212> PRT
 <213> Homo Sapiens

<400> 45
 Lys Thr Gln Glu Lys Pro Pro Lys Glu Leu Val Asn Glu Trp Ser Leu
 1 5 10 15
 Lys Ile Arg Lys Glu Met Arg Val Val Asp Arg Gln Ile Arg Asp Ile
 20 25 30
 Gln Arg Glu Glu Glu Lys Val Lys Arg Ser Val Lys Asp Ala Ala Lys
 35 40 45
 Lys Gly Gln Lys Asp Val Cys Ile Val Leu Ala Lys Glu Met Ile Arg
 50 55 60
 Ser Arg Lys Ala Val Ser Lys Leu Ala Ser Lys Ala His Met Asn Ser
 65 70 75 80
 Val Leu Met Gly Met Lys Asn Gln Leu Ala Val Leu Arg Val Ala Gly
 85 90 95
 Ser Leu Gln Lys Ser Thr Glu Val Met Lys Ala Met Gln Ser Leu Val
 100 105 110
 Lys Ile Pro Glu Ile Gln Ala Thr Met Arg Glu Leu Ser Lys Glu Met
 115 120 125
 Met Lys Ala Gly Ile Ile Glu Glu Met Leu Glu Asp Thr Phe Glu Ser
 130 135 140
 Met Asp Asp Gln Glu Glu Met Glu Glu Ala Glu Met Glu Ile Asp
 145 150 155 160
 Arg Ile Leu Phe Glu Ile Thr Ala Gly Ala Leu Gly Lys Ala Pro Ser
 165 170 175
 Lys Val Thr Asp Ala Leu Pro Glu Pro Glu Pro Pro Gly Ala Met Ala
 180 185 190
 Ala Ser Glu Asp Glu Glu Glu Glu Glu Leu Glu Ala Met Gln Ser
 195 200 205
 Arg Leu Ala Thr Arg Ser
 210

<210> 46
 <211> 248
 <212> PRT
 <213> Homo Sapiens

<400> 46

Gly Ser Arg Glu Glu Thr Leu Ala Phe Val Pro Leu Leu Arg Leu Leu
 1 5 10 15
 Glu Ala Thr Leu Ser Pro Gly Arg Ala Phe Cys Ser Pro Ile Ser Ser
 20 25 30
 Lys Ile Gln Pro Ala Gln Val Ala Gly His Glu Leu Cys Ser Gly Ser
 35 40 45
 Trp Asn Leu Thr Leu Val Ala Ser Gly Pro Val Ser Met Ala Ala Glu
 50 55 60
 His Leu Leu Pro Gly Pro Pro Ser Leu Ala Asp Phe Leu Glu Ala
 65 70 75 80
 Gly Gly Lys Gly Thr Glu Arg Gly Ser Gly Ser Ser Lys Pro Thr Gly
 85 90 95
 Ser Ser Gly Gly Pro Arg Met Ala Ser Phe Pro Lys Thr Lys Phe Asn
 100 105 110
 Glu Tyr Lys Asp Val Leu Pro Cys Met Thr Ser Ser Arg Gly Gly Lys
 115 120 125
 Ile Lys Ala Thr Asp Phe Met Val Ala Met Arg Cys Leu Gly Ala Ser
 130 135 140
 Pro Thr Pro Gly Glu Val Gln Arg His Leu Gln Thr His Gly Ile Asp
 145 150 155 160
 Gly Asn Gly Glu Leu Asp Phe Ser Thr Phe Leu Thr Ile Met His Met
 165 170 175
 Gln Ile Lys Gln Glu Asp Pro Lys Lys Glu Ile Leu Leu Ala Met Leu
 180 185 190
 Met Val Asp Lys Glu Lys Lys Gly Tyr Val Met Ala Ser Asp Leu Arg
 195 200 205
 Ser Lys Leu Thr Ser Gly Glu Lys Leu Thr His Lys Glu Val Asp Asp
 210 215 220
 Leu Phe Arg Glu Ala Asp Ile Glu Pro Asn Gly Lys Val Lys Tyr Asp
 225 230 235 240
 Glu Phe Ile His Lys Ile Thr Leu
 245

<210> 47

<211> 177
 <212> PRT
 <213> Homo Sapiens

<400> 47

Leu Cys Cys Met His Tyr Cys Cys Lys Ser Cys Trp Asn Glu Tyr Leu
 1 5 10 15
 Thr Thr Arg Ile Glu Gln Asn Leu Val Leu Asn Cys Thr Cys Pro Ile
 20 25 30
 Ala Asp Cys Pro Ala Gln Pro Thr Gly Ala Phe Ile Arg Ala Ile Val
 35 40 45
 Ser Ser Pro Glu Val Ile Ser Lys Tyr Lys Ala Leu Leu Arg Gly Tyr
 50 55 60
 Val Glu Ser Cys Ser Asn Leu Thr Trp Cys Thr Asn Pro Gln Gly Cys
 65 70 75 80
 Asp Arg Ile Leu Cys Arg Gln Gly Leu Gly Cys Gly Thr Thr Cys Ser
 85 90 95
 Lys Cys Gly Trp Ala Ser Cys Phe Asn Cys Ser Phe Pro Glu Ala His
 100 105 110
 Tyr Pro Ala Ser Cys Gly His Met Ser Gln Trp Val Asp Asp Gly Gly

115	120	125
Tyr	Tyr Asp Gly Met Ser Val Glu Ala Lys His Leu Ala Lys Leu Ile	
130	135	140
Ser Lys Arg Cys Pro Ser Cys Gln Ala Pro Ile Glu Asn Glu Gly Cys		
145	150	155
Leu His Met Thr Cys Ala Lys Cys Asn His Gly Phe Cys Trp Arg Cys		160
165	170	175
Leu		

<210> 48
<211> 102
<212> PRT
<213> Homo Sapiens

<400> 48		
Glu Lys Gly Leu His Ile Asp Gln Leu Val Cys Leu Val Leu Glu Ala		
1	5	10
Gln Lys Gly Pro Asn Pro Pro Gly Thr Leu Gly His Thr Val Ala Gly		15
20	25	30
Gly Val Ala Cys Thr Thr Val Leu Ser Cys Leu His Leu Leu Ser		
35	40	45
Gln Gly Tyr Lys Arg Asp Arg Pro Gln Ile Leu Met Tyr Ala Ala Pro		
50	55	60
Pro Met Gly Pro Cys Arg Gly Ala His Phe Cys Gly Ser Ser Gln Thr		
65	70	75
Ser Pro Pro Lys Pro Val Ala Thr Leu Ser Leu Leu Pro Cys Pro Leu		80
85	90	95
Pro Pro Leu Lys Asn Gly		
100		

<210> 49
<211> 179
<212> PRT
<213> Homo Sapiens

<400> 49		
His Lys Pro Cys Asn Pro Arg Glu Lys Glu Arg Ile Gln Asn Ala Gly		
1	5	10
Gly Ser Val Met Ile Gln Arg Val Asn Gly Ser Leu Ala Val Ser Arg		15
20	25	30
Ala Leu Gly Asp Tyr Asp Tyr Lys Cys Val Asp Gly Lys Gly Pro Thr		
35	40	45
Glu Gln Leu Val Ser Pro Glu Pro Glu Val Tyr Glu Ile Leu Arg Ala		
50	55	60
Glu Glu Asp Glu Phe Ile Ile Leu Ala Cys Asp Gly Ile Trp Asp Val		
65	70	75
Met Ser Asn Glu Glu Leu Cys Glu Tyr Val Lys Ser Arg Leu Glu Val		80
85	90	95
Ser Asp Asp Leu Glu Asn Val Cys Asn Trp Val Val Asp Thr Cys Leu		
100	105	110
His Lys Gly Ser Arg Asp Asn Met Ser Ile Val Leu Val Cys Phe Ser		
115	120	125
Asn Ala Pro Lys Val Ser Asp Glu Ala Val Lys Lys Asp Ser Glu Leu		
130	135	140

Asp Lys His Leu Glu Ser Ile Met Glu Asn Leu Ala Lys Glu Cys Leu
 145 150 155 160
 Ile Leu Pro Met Ser Cys Ala Ser Cys Leu Gln Lys Ile Ser Gln Ile
 165 170 175
 Cys Leu Leu

<210> 50
<211> 163
<212> PRT
<213> Homo Sapiens

<400> 50
Asp Leu Pro Thr Leu Glu Asp His Gln Lys Gln Ser Gln Gln Leu Lys
 1 5 10 15
Asp Ser Glu Leu Lys Ser Thr Glu Leu Gln Glu Lys Val Thr Glu Leu
 20 25 30
Glu Ser Leu Leu Glu Glu Thr Gln Ala Ile Cys Arg Glu Lys Glu Ile
 35 40 45
Gln Leu Glu Ser Leu Arg Gln Arg Glu Ala Glu Phe Ser Ser Ala Gly
 50 55 60
His Ser Leu Gln Asp Lys Gln Ser Val Glu Glu Thr Ser Gly Glu Gly
 65 70 75 80
Pro Glu Val Glu Met Glu Ser Trp Gln Lys Arg Tyr Asp Ser Leu Gln
 85 90 95
Lys Ile Val Glu Lys Gln Gln Lys Met Asp Gln Leu Arg Ser Gln
 100 105 110
Val Gln Ser Leu Glu Gln Glu Val Ala Glu Glu Gly Thr Ser Gln Ala
 115 120 125
Leu Arg Glu Glu Ala Gln Arg Arg Asp Ser Ala Leu Gln Gln Leu Arg
 130 135 140
Thr Ala Val Lys Leu Ser Val Asn Gln Asp Leu Ile Glu Lys Asn Leu
 145 150 155 160
Thr Leu Gln

<210> 51
<211> 164
<212> PRT
<213> Homo Sapiens

<400> 51
Phe Gly Asp Ser Val Asp Cys Ser Asp Cys Trp Leu Pro Val Val Lys
 1 5 10 15
Phe Ile Glu Glu Gln Phe Glu Gln Tyr Leu Arg Asp Glu Ser Gly Leu
 20 25 30
Asn Arg Lys Asn Ile Gln Asp Ser Arg Val His Cys Cys Leu Tyr Phe
 35 40 45
Ile Ser Pro Phe Gly Arg Gly Leu Arg Pro Leu Ala Phe Leu Arg Ala
 50 55 60
Val His Lys Val Asn Ile Ile Pro Val Ile Gly Lys Ala Asp Ala Leu
 65 70 75 80
Met Pro Gln Glu Thr Gln Ala Leu Lys Gln Lys Ile Arg Asp Gln Leu
 85 90 95
Lys Glu Glu Glu Ile His Ile Tyr Gln Phe Pro Glu Cys Asp Ser Asp

100	105	110
Glu Asp Glu Asp Phe Lys Arg Gln Asp Ala Met Lys Glu Ser Ile Pro		
115	120	125
Phe Ala Val Val Gly Ser Cys Gln Val Val Arg Asp Gly Gly Asn Arg		
130	135	140
Pro Val Arg Gly Arg Arg Tyr Ser Trp Gly Asn Val Glu Val Asn His		
145	150	155
Ile Ala Ile Ser		

<210> 52
 <211> 600
 <212> PRT
 <213> Homo Sapiens

<400> 52			
Met Cys Pro Arg Gln Val Asp Arg Ala Lys Glu Lys Gly Ile Gly Thr			
1	5	10	15
Pro Gln Pro Asp Val Ala Lys Asp Ser Trp Ala Glu Leu Glu Asn Ser			
20	25	30	
Ser Lys Glu Asn Glu Val Ile Glu Val Lys Ser Met Gly Glu Ser Gln			
35	40	45	
Ser Lys Lys Leu Gln Gly Gly Tyr Glu Cys Lys Tyr Cys Pro Tyr Ser			
50	55	60	
Thr Gln Asn Leu Asn Glu Phe Thr Glu His Val Asp Met Gln His Pro			
65	70	75	80
Asn Val Ile Leu Asn Pro Leu Tyr Val Cys Ala Glu Cys Asn Phe Thr			
85	90	95	
Thr Lys Lys Tyr Asp Ser Leu Ser Asp His Asn Ser Lys Phe His Pro			
100	105	110	
Gly Glu Ala Asn Phe Lys Leu Lys Leu Ile Lys Arg Asn Asn Gln Thr			
115	120	125	
Val Leu Glu Gln Ser Ile Glu Thr Thr Asn His Val Val Ser Ile Thr			
130	135	140	
Thr Ser Gly Pro Gly Thr Gly Asp Ser Asp Ser Gly Ile Ser Val Ser			
145	150	155	160
Lys Thr Pro Ile Met Lys Pro Gly Lys Pro Lys Ala Asp Ala Lys Lys			
165	170	175	
Val Pro Lys Lys Pro Glu Glu Ile Thr Pro Glu Asn His Val Glu Gly			
180	185	190	
Thr Ala Arg Leu Val Thr Asp Thr Ala Glu Ile Leu Ser Arg Leu Gly			
195	200	205	
Gly Val Glu Leu Leu Gln Asp Thr Leu Gly His Val Met Pro Ser Val			
210	215	220	
Gln Leu Pro Pro Asn Ile Asn Leu Val Pro Lys Val Pro Val Pro Leu			
225	230	235	240
Asn Thr Thr Lys Tyr Asn Ser Ala Leu Asp Thr Asn Ala Thr Met Ile			
245	250	255	
Asn Ser Phe Asn Lys Phe Pro Tyr Pro Thr Gln Ala Glu Leu Ser Trp			
260	265	270	
Leu Thr Ala Ala Ser Lys His Pro Glu Glu His Ile Arg Ile Trp Phe			
275	280	285	
Ala Thr Gln Arg Leu Lys His Gly Ile Ser Trp Ser Pro Glu Glu Val			
290	295	300	
Glu Glu Ala Arg Lys Lys Met Phe Asn Gly Thr Ile Gln Ser Val Pro			

305	310	315	320												
Pro	Thr	Ile	Thr	Val	Leu	Pro	Ala	Gln	Leu	Ala	Pro	Thr	Lys	Met	Thr
325															
Gln	Pro	Ile	Leu	Gln	Thr	Ala	Leu	Pro	Cys	Gln	Ile	Leu	Gly	Gln	Thr
340															
Ser	Leu	Val	Leu	Thr	Gln	Val	Thr	Ser	Gly	Ser	Thr	Thr	Val	Ser	Cys
355															
Ser	Pro	Ile	Thr	Leu	Ala	Val	Ala	Gly	Val	Thr	Asn	His	Gly	Gln	Lys
370															
Arg	Pro	Leu	Val	Thr	Pro	Gln	Ala	Ala	Pro	Glu	Pro	Lys	Arg	Pro	His
385															
Ile	Ala	Gln	Val	Pro	Glu	Pro	Pro	Pro	Lys	Val	Ala	Asn	Pro	Pro	Leu
405															
Thr	Pro	Ala	Ser	Asp	Arg	Lys	Lys	Thr	Lys	Glu	Gln	Ile	Ala	His	Leu
420															
Lys	Ala	Ser	Phe	Leu	Gln	Ser	Gln	Phe	Pro	Asp	Asp	Ala	Glu	Val	Tyr
435															
Arg	Leu	Ile	Glu	Val	Thr	Gly	Leu	Ala	Arg	Ser	Glu	Ile	Lys	Lys	Trp
450															
Phe	Ser	Asp	His	Arg	Tyr	Arg	Cys	Gln	Arg	Gly	Ile	Val	His	Ile	Thr
465															
Ser	Glu	Ser	Leu	Ala	Lys	Asp	Gln	Leu	Ala	Ile	Ala	Ala	Ser	Arg	His
485															
Gly	Arg	Thr	Tyr	His	Ala	Tyr	Pro	Asp	Phe	Ala	Pro	Gln	Lys	Phe	Lys
500															
Glu	Lys	Thr	Gln	Gly	Gln	Val	Lys	Ile	Leu	Glu	Asp	Ser	Phe	Leu	Lys
515															
Ser	Ser	Phe	Pro	Thr	Gln	Ala	Glu	Leu	Asp	Arg	Leu	Arg	Val	Glu	Thr
530															
Lys	Leu	Ser	Arg	Arg	Glu	Ile	Asp	Ser	Trp	Phe	Ser	Glu	Arg	Arg	Lys
545															
Leu	Arg	Asp	Ser	Met	Glu	Gln	Ala	Val	Leu	Asp	Ser	Met	Gly	Ser	Gly
565															
Gln	Lys	Arg	Pro	Arg	Cys	Gly	Lys	Pro	Pro	Met	Val	Leu	Cys	Leu	Asp
580															
Ser	Asn	Ser	Ser	Pro	Val	Pro	Ser								
595															
600															

<210> 53
<211> 163
<212> PRT
<213> Homo Sapiens

<400> 53

Arg	Lys	Ser	Trp	Glu	His	Lys	Glu	Glu	Ile	Ser	Glu	Ala	Glu	Pro	Gly
1				5				10						15	
Gly	Gly	Ser	Leu	Gly	Asp	Gly	Arg	Pro	Pro	Glu	Glu	Ser	Ala	His	Glu
								20		25				30	
Met	Met	Glu	Glu	Glu	Glu	Ile	Pro	Lys	Pro	Lys	Ser	Val	Val	Ala	
								35		40				45	
Pro	Pro	Gly	Ala	Pro	Lys	Lys	Glu	His	Val	Asn	His	Val	Ala	Gly	Lys
								50		55				60	
Ser	Thr	Ile	Gly	Gly	Gln	Ile	Met	Tyr	Leu	Thr	Gly	Met	Val	Asp	Lys
65								70		75				80	
Arg	Thr	Leu	Glu	Lys	Tyr	Glu	Arg	Glu	Ala	Lys	Glu	Lys	Asn	Arg	Glu

	85	90	95
Thr Trp Tyr Leu Ser Trp Ala Leu Asp		Thr Asn Gln Glu Glu Arg Asp	
100	105		110
Lys Gly Lys Thr Val Glu Val Gly Arg Ala Tyr Phe Glu Thr Glu Lys			
115	120		125
Lys His Phe Thr Ile Leu Asp Met Asn Pro Arg Thr Leu Ser Ser Lys			
130	135		140
Pro Lys Ala Gln Asn Leu Lys Leu Lys Val Pro Asn Ser Lys Val Arg			
145	150		155
Arg Cys Phe			160

<210> 54
<211> 155
<212> PRT
<213> Homo Sapiens

	<400> 54			
Glu Arg Trp Pro Glu Glu Gly Thr Ala Asp Leu Ala Gln Ser Gly Leu				
1	5	10	15	
Glu Gly Gly Thr Thr Arg Ala Ser Val Ser Trp Cys Cys Leu Glu Gly				
20	25		30	
Ser Trp Leu Leu Ser Gly Tyr Leu Thr Phe Leu Lys Thr Cys Ser His				
35	40		45	
Thr Ala Ser Leu Ala Val Ser Ser Ser Cys Arg Ile Arg His Glu				
50	55		60	
Leu Val Pro Asn Ser Ala Arg Gly Lys His Tyr Ser Gln Arg Trp Ala				
65	70		75	80
Gln Glu Asp Leu Leu Glu Glu Gln Lys Asp Gly Ala Arg Ala Ala Ala				
85	90		95	
Val Ala Asp Lys Lys Gly Leu Met Gly Pro Leu Thr Glu Leu Asp				
100	105		110	
Thr Lys Asp Val Asp Ala Leu Leu Lys Lys Ser Glu Ala Gln His Glu				
115	120		125	
Gln Pro Glu Asp Gly Cys Pro Phe Gly Ala Leu Thr Gln Arg Leu Leu				
130	135		140	
Gln Ala Leu Val Glu Glu Asn Ile Ile Phe Ser				
145	150		155	

<210> 55
<211> 112
<212> PRT
<213> Homo Sapiens

	<400> 55			
Ser Glu Arg Ala Leu Ala Pro Arg Thr Tyr Arg Met Glu Thr Ala Arg				
1	5	10	15	
Ser Ala Pro Tyr Met Arg Ser Met Met Gln Ser Leu Ser Gln Asn Pro				
20	25		30	
Asp Leu Ala Ala Gln Met Met Leu Asn Ser Pro Leu Phe Thr Ala Asn				
35	40		45	
Pro Gln Leu Gln Glu Gln Met Arg Pro Gln Leu Pro Ala Phe Leu Gln				
50	55		60	
Gln Met Gln Asn Pro Asp Thr Leu Ser Ala Met Ser Asn Pro Arg Ala				
65	70		75	80

Met Gln Ala Leu Met Gln Ile Gln Gln Gly Leu Gln Thr Leu Ala Thr
 85 90 95
 Glu Ala Pro Gly Leu Ile Pro Ser Phe Thr Pro Gly Val Gly Val Gly
 100 105 110

<210> 56
 <211> 151
 <212> PRT
 <213> Homo Sapiens

<400> 56

Lys Phe Gly Met Pro Ile Asp Cys Gly Leu Pro Pro His Ile Asp Phe
 1 5 10 15
 Gly Asp Cys Thr Lys Leu Lys Asp Asp Gln Gly Tyr Phe Glu Gln Glu
 20 25 30
 Asp Asp Met Met Glu Val Pro Tyr Val Thr Pro His Pro Pro Tyr His
 35 40 45
 Leu Gly Ala Val Ala Lys Thr Trp Glu Asn Thr Lys Glu Ser Pro Ala
 50 55 60
 Thr His Ser Ser Asn Phe Leu Tyr Gly Thr Met Val Ser Tyr Thr Cys
 65 70 75 80
 Asn Pro Gly Tyr Glu Leu Leu Gly Asn Pro Val Leu Ile Cys Gln Glu
 85 90 95
 Asp Gly Thr Trp Asn Gly Ser Ala Pro Ser Cys Ile Ser Ile Glu Cys
 100 105 110
 Asp Leu Pro Thr Ala Pro Glu Asn Gly Phe Leu Arg Phe Thr Glu Thr
 115 120 125
 Ser Met Gly Ser Ala Val Gln Tyr Ser Cys Lys Pro Gly His Ile Leu
 130 135 140
 Ala Gly Ser Asp Leu Arg Leu
 145 150

<210> 57
 <211> 220
 <212> PRT
 <213> Homo Sapiens

<400> 57

Ala Ala Phe Val Ser Glu Val Thr Ser Phe Pro Val Val Gln Leu His
 1 5 10 15
 Met Asn Arg Thr Ala Met Arg Ala Ser Gln Lys Asp Phe Glu Asn Ser
 20 25 30
 Ile Asn Gln Val Lys Leu Leu Lys Lys Asp Pro Gly Asn Glu Val Lys
 35 40 45
 Leu Lys Leu Tyr Ala Leu Tyr Lys Gln Ala Thr Glu Gly Pro Cys Asn
 50 55 60
 Met Pro Lys Pro Gly Val Phe Asp Leu Ile Asn Lys Ala Lys Trp Asp
 65 70 75 80
 Ala Trp Asn Ala Leu Gly Ser Leu Pro Lys Glu Ala Ala Arg Gln Asn
 85 90 95
 Tyr Val Asp Leu Val Ser Ser Leu Ser Pro Ser Leu Glu Ser Ser Ser
 100 105 110
 Gln Val Glu Pro Gly Thr Asp Arg Lys Ser Thr Gly Phe Glu Thr Leu
 115 120 125
 Val Val Thr Ser Glu Asp Gly Ile Thr Lys Ile Met Phe Asn Arg Pro

130	135	140
Lys Lys Lys Asn Ala Ile Asn Thr Glu Met Tyr His Glu Ile Met Arg		
145	150	155
Ala Leu Lys Ala Ala Ser Lys Asp Asp Ser Ile Ile Thr Val Leu Thr		160
165	170	175
Gly Asn Gly Asp Tyr Tyr Ser Ser Gly Asn Asp Leu Thr Asn Phe Thr		
180	185	190
Asp Ile Pro Pro Gly Gly Val Glu Lys Ala Lys Asn Asn Ala Val Leu		
195	200	205
Leu Lys Gly Ile Cys Gly Leu Phe Tyr Arg Ile Ser		
210	215	220

<210> 58
<211> 101
<212> PRT
<213> Homo Sapiens

<400> 58		
Trp Pro Asp Leu Val His Thr Trp Ser Ser Glu Glu Ala Met Gly Ser		
1	5	10
Cys Cys Ser Cys Pro Asp Lys Asp Thr Val Pro Asp Asn His Arg Asn		15
20	25	30
Lys Phe Lys Val Ile Asn Val Asp Asp Asp Gly Asn Glu Leu Gly Ser		
35	40	45
Gly Ile Met Glu Leu Thr Asp Thr Glu Leu Ile Leu Tyr Thr Arg Lys		
50	55	60
Arg Asp Ser Val Lys Trp His Tyr Leu Cys Leu Arg Arg Tyr Gly Tyr		
65	70	75
Asp Ser Asn Leu Phe Ser Phe Glu Ser Gly Pro Arg Cys Gln Thr Gly		80
85	90	95
Thr Arg Asn Leu Cys		
100		

<210> 59
<211> 43
<212> PRT
<213> Homo Sapiens

<400> 59		
Ala His Gly Pro Gly Val Glu Pro Thr Ser Arg His Gln Lys Asn Asn		
1	5	10
Leu Ser Ser Ser His Thr Val Arg Leu Glu Thr Arg Gly Gln Thr Glu		15
20	25	30
Asn Gln Glu Cys Leu Leu Cys Pro His Glu Glu		
35	40	

<210> 60
<211> 210
<212> PRT
<213> Homo Sapiens

<400> 60		
Leu Asn Gln Trp Thr Tyr Gln Ala Met Val His Glu Leu Leu Gly Ile		
1	5	10
Asn Asn Asn Arg Ile Asp Leu Ser Arg Val Pro Gly Ile Ser Lys Asp		15

	20	25	30												
Leu	Arg	Glu	Val	Val	Leu	Ser	Ala	Glu	Asn	Asp	Glu	Phe	Tyr	Ala	Asn
		35			40							45			
Asn	Met	Tyr	Leu	Asn	Phe	Ala	Glu	Ile	Gly	Ser	Asn	Ile	Lys	Asn	Leu
		50			55							60			
Met	Glu	Asp	Phe	Gln	Lys	Lys	Lys	Pro	Lys	Glu	Gln	Gln	Lys	Leu	Glu
		65			70					75			80		
Ser	Ile	Ala	Asp	Met	Lys	Ala	Phe	Val	Glu	Asn	Tyr	Pro	Gln	Phe	Lys
		85					90						95		
Lys	Met	Ser	Gly	Thr	Val	Ser	Lys	His	Val	Thr	Val	Val	Gly	Glu	Leu
		100					105						110		
Ser	Arg	Leu	Val	Ser	Glu	Arg	Asn	Leu	Leu	Glu	Val	Ser	Glu	Val	Glu
		115					120						125		
Gln	Glu	Leu	Ala	Cys	Gln	Asn	Asp	His	Ser	Ser	Ala	Leu	Gln	Asn	Ile
		130			135							140			
Lys	Arg	Leu	Leu	Gln	Asn	Pro	Lys	Val	Thr	Glu	Phe	Asp	Ala	Ala	Arg
		145			150					155			160		
Leu	Val	Met	Leu	Tyr	Ala	Leu	His	Tyr	Glu	Arg	His	Ser	Ser	Asn	Ser
		165					170						175		
Leu	Pro	Gly	Leu	Met	Met	Leu	Arg	Asn	Lys	Gly	Val	Ser	Glu	Lys	Tyr
		180					185						190		
Arg	Lys	Leu	Val	Ser	Ala	Val	Val	Glu	Tyr	Gly	Gly	Lys	Thr	Ser	Gln
		195					200						205		
Arg	Lys														
		210													

<210> 61
<211> 40
<212> PRT
<213> Homo Sapiens

	<400> 61														
Thr	Pro	Gly	Pro	Gly	Ala	Gly	Phe	Tyr	Ala	Cys	Pro	Ala	Arg	Pro	Leu
					1	5			10		15				
Val	Ser	Gly	Ile	Tyr	Ser	Phe	Arg	Trp	Val	Arg	Gly	Leu	Ala	Asp	Gln
					20			25				30			
Glu	Arg	Asn	Trp	Gly	Leu	Ser	Gln								
		35				40									

<210> 62
<211> 238
<212> PRT
<213> Homo Sapiens

	<400> 62														
His	Glu	Ala	Arg	Leu	Lys	Arg	Ala	Ser	Ala	Pro	Thr	Phe	Asp	Asn	Asp
					1	5			10			15			
Tyr	Ser	Leu	Ser	Glu	Leu	Leu	Ser	Gln	Leu	Asp	Ser	Gly	Val	Ser	Gln
					20			25				30			
Ala	Val	Glu	Gly	Pro	Glu	Glu	Leu	Ser	Arg	Ser	Ser	Ser	Glu	Ser	Lys
					35			40				45			
Leu	Pro	Ser	Ser	Gly	Ser	Gly	Lys	Arg	Leu	Ser	Gly	Val	Ser	Ser	Val
					50			55			60				
Asp	Ser	Ala	Phe	Ser	Ser	Arg	Gly	Ser	Leu	Ser	Leu	Ser	Phe	Glu	Arg
		65			70				75			80			

Glu Pro Ser Thr Ser Asp Leu Gly Thr Thr Asp Val Gln Lys Lys Lys
 85 90 95
 Leu Val Asp Ala Ile Val Ser Gly Asp Thr Ser Lys Leu Met Lys Ile
 100 105 110
 Leu Gln Pro Gln Asp Val Asp Leu Ala Leu Asp Ser Gly Ala Ser Leu
 115 120 125
 Leu His Leu Ala Val Glu Ala Gly Gln Glu Glu Cys Ala Lys Trp Leu
 130 135 140
 Leu Leu Asn Asn Ala Asn Pro Asn Leu Ser Asn Arg Arg Gly Ser Thr
 145 150 155 160
 Pro Leu His Met Ala Val Glu Arg Arg Val Arg Gly Val Val Glu Leu
 165 170 175
 Leu Leu Ala Arg Ile Ser Val Asn Ala Lys Asp Glu Asp Gln Trp Thr
 180 185 190
 Ala Leu His Phe Ala Asn Gly Gly Val His Thr Ala Ala Val Gly Glu
 195 200 205
 Arg Leu Gly Gln Thr Lys Val Asp Phe Glu Gly Arg Thr Pro Met Gln
 210 215 220
 Val Gly Leu Pro Thr Thr Gly Lys Asn Ile Leu Arg Ile Leu
 225 230 235

<210> 63
 <211> 146
 <212> PRT
 <213> Homo Sapiens

<400> 63
 Arg Leu Gly Ala Ala Met Met Glu Gly Leu Asp Asp Gly Pro Asp Phe
 1 5 10 15
 Leu Ser Glu Glu Asp Arg Gly Leu Lys Ala Ile Asn Val Asp Leu Gln
 20 25 30
 Ser Asp Ala Ala Leu Gln Val Asp Ile Ser Asp Ala Leu Ser Glu Arg
 35 40 45
 Asp Lys Val Lys Phe Thr Val His Thr Lys Ile Pro Pro Ala Pro Pro
 50 55 60
 Arg Pro Asp Phe Asp Ala Ser Arg Glu Lys Leu Gln Lys Leu Gly Glu
 65 70 75 80
 Gly Glu Gly Ser Met Thr Lys Glu Glu Phe Thr Lys Met Lys Gln Glu
 85 90 95
 Leu Glu Ala Glu Tyr Leu Ala Ile Phe Lys Lys Thr Val Ala Met His
 100 105 110
 Glu Val Phe Leu Cys Arg Val Ala Ala His Pro Ile Leu Arg Arg Asp
 115 120 125
 Leu Asn Phe His Val Phe Leu Glu Tyr Asn Gln Asp Leu Ser Val Arg
 130 135 140
 Gly Lys
 145

<210> 64
 <211> 63
 <212> PRT
 <213> Homo Sapiens

<400> 64
 Glu Arg Gly His Ser Ile Lys Asp Phe Val Ser Phe Ala Arg His Phe

1	5	10	15
Ser Pro Asn Pro Arg Ile Val Ser Val Asn Ala Ser Tyr Ser Leu Ser			
20	25	30	
Asn Glu Ser Ser Leu Glu Gln Val Tyr Thr Leu Lys Met Ser Phe Ile			
35	40	45	
Ala Ser Asn Thr Tyr His Asn Gln Leu Tyr Lys Glu Gly Phe Leu			
50	55	60	

<210> 65
<211> 199
<212> PRT
<213> Homo Sapiens

1	5	10	15
Glu Ala Pro Asp Ser Ala Glu Gly Thr Thr Leu Thr Val Leu Pro Glu			
20	25	30	
Gly Glu Glu Leu Pro Leu Cys Val Ser Glu Ser Asn Gly Leu Glu Leu			
35	40	45	
Pro Pro Ser Ala Ala Ser Asp Glu Pro Leu Gln Glu Pro Leu Glu Ala			
50	55	60	
Asp Arg Thr Ser Glu Glu Leu Thr Glu Ala Lys Thr Pro Thr Ser Ser			
65	70	75	80
Thr Ser Ser Ser Ala Thr Ser Ser Pro Glu Gly Pro Ser Pro Ala Arg			
85	90	95	
Pro Pro Arg Arg Arg Thr Ser Ala Asp Val Glu Ile Arg Gly Gln Gly			
100	105	110	
Thr Gly Arg Pro Gly Gln Pro Pro Gly Pro Lys Val Leu Arg Lys Leu			
115	120	125	
Pro Gly Arg Leu Val Thr Val Val Glu Glu Lys Glu Leu Val Arg Arg			
130	135	140	
Arg Arg Gln Gln Arg Gly Ala Ala Ser Thr Leu Val Pro Gly Val Ser			
145	150	155	160
Glu Thr Ser Ala Ser Pro Gly Ser Pro Ser Val Arg Ser Met Ser Gly			
165	170	175	
Pro Glu Ser Ser Pro Pro Ile Gly Gly Pro Cys Glu Ala Ala Pro Ser			
180	185	190	
Ser Ser Leu Pro Thr Pro Pro			
195			

<210> 66
<211> 1599
<212> DNA
<213> Homo Sapiens

<400> 66	
ttctttgaaa cattattatt cagaacgaag gagaatgata cagatacact ggctgaggta	60
tttgagggtg cattgaaatg ttccatgctg ttacttagt taacatgttc ttgaggtaacc	120
atgccatgga ttaaaaggaa atttggttaag tggcttccac ctaaacgact tactaggaa	180
gctatgcgaa attattnaaa agggttaaggg gatcaaatacg tacttatcct tcattgcggaa	240
gttgtacaga agtcatatgg caatcaaaaa attttttttt gccctcccccc ttgtgtatat	300
cttatgggca gtggatggaa gaaaaaaaaa gaacaaatga aatgcgtatgg ttgttctgaa	360
cacagcttc atccatgtgc atttattggg atagggaaata gtgaccaaga aatgcagcag	420
ctaaacttgg aaggaaagaa ctattgcaca gccaaaacat tgtacatatac tgattcagac	480

aagcaaaaagc	acttcatttt	ttctgtaaag	gtgttctatg	gcaacggta	tgacatttgt	540
gtgttcctca	gcaaggtagat	aaaagtcatc	tccaaacacctt	ccaaaaagaa	gcagtcattg	600
aaaaaatctg	acttatgcat	tgtctcagga	acaaagggtgg	ctctgtttaa	tgcactacga	660
tcccagacag	ttagtaccag	atacttgcat	gttagaaggag	gtaatttca	tgccaggttca	720
cagcagtggg	gagcatttt	catcaattc	ttggatgtat	atggatcaga	aggagaagaa	780
ttcacagtct	gagatgccta	cattcattat	ggacaaaacat	gcaaacttgt	gtgctcagtt	840
actggcatgg	cactcccaag	attgataatt	atgaaagttt	ataagcatac	cgcattattt	900
gatgcagatg	atccctgtgtc	acaactccat	aaatgtgcat	tttaccttaa	ggatacagaa	960
agaatgtatt	tgtgcctttc	tcaagaaaaga	ataattcaat	ttcaggccac	tccatgtcca	1020
agagaaccaa	ataaaagagat	gataaatgtat	ggcgcttctt	ggacaatcat	tagcacagat	1080
aaggcagggt	atacatttt	tgagggatgt	ggccctgtcc	ttgccccagt	cactcctgt	1140
cctgtggtag	agagccttca	gttgaatggc	gggtggggacg	tagcaatgt	tgaacttaca	1200
ggacagaatt	tcactccaaa	tttacagatgt	tggtttgggg	gggttagaagc	tgaaactatg	1260
tacagggtgt	gagagagat	gctctgtgtc	gtcccagaca	tttctgcatt	ccgagaaggt	1320
tggagatggg	tccggcaacc	agtccagggtt	ccagtaactt	tggtccgaaa	tgatggaaatc	1380
atttatttcca	ccagccttac	ctttacctac	acaccagaac	cagggccgcg	gccacattgc	1440
agtgcagcag	gagcaatcct	tcttagccaat	tcaagccagg	tgccccctaa	cgaatcaaac	1500
acaaacacagcg	aggaaagttt	cacaaacgccc	agcacaaaatt	caaccagtgt	cacatcatct	1560
acagccacag	tggtatactta	actaccgtct	ttttgtctag			1599

<210> 67
<211> 729
<212> PRT
<213> Homo Sapiens

<400> 67
 Met Gly Lys Lys Tyr Lys Asn Ile Val Leu Leu Lys Gly Leu Glu Val
 1 5 10 15
 Ile Asn Asp Tyr His Phe Arg Met Val Lys Ser Leu Leu Ser Asn Asp
 20 25 30
 Leu Lys Leu Asn Leu Lys Met Arg Glu Glu Tyr Asp Lys Ile Gln Ile
 35 40 45
 Ala Asp Leu Met Glu Glu Lys Phe Arg Gly Asp Ala Gly Leu Gly Lys
 50 55 60
 Leu Ile Lys Ile Phe Glu Asp Ile Pro Thr Leu Glu Asp Leu Ala Glu
 65 70 75 80
 Thr Leu Lys Lys Glu Lys Leu Lys Val Lys Gly Pro Ala Leu Ser Arg
 85 90 95
 Lys Arg Lys Lys Glu Val His Ala Thr Ser Pro Ala Pro Ser Thr Ser
 100 105 110
 Ser Thr Val Lys Thr Glu Gly Ala Glu Ala Thr Pro Gly Ala Gln Lys
 115 120 125
 Arg Lys Lys Ser Thr Lys Glu Lys Ala Gly Pro Lys Gly Ser Lys Val
 130 135 140
 Ser Glu Glu Gln Thr Gln Pro Pro Ser Pro Ala Gly Ala Gly Met Ser
 145 150 155 160
 Thr Ala Met Gly Arg Ser Pro Ser Pro Lys Thr Ser Leu Ser Ala Pro
 165 170 175
 Pro Asn Ser Ser Ser Thr Glu Asn Pro Lys Thr Val Ala Lys Cys Gln
 180 185 190
 Val Thr Pro Arg Arg Asn Val Leu Gln Lys Arg Pro Val Ile Val Lys
 195 200 205
 Val Leu Ser Thr Thr Lys Pro Phe Glu Tyr Glu Thr Pro Glu Met Glu
 210 215 220
 Lys Lys Ile Met Phe His Ala Thr Val Ala Thr Gln Thr Gln Phe Phe

225	230	235	240
His Val Lys Val Leu Asn Thr Ser Leu Lys Glu Lys Phe Asn Gly Lys			
245	250	255	
Lys Ile Ile Ile Ile Ser Asp Tyr Leu Glu Tyr Asp Ser Leu Leu Glu			
260	265	270	
Val Asn Glu Glu Ser Thr Val Ser Glu Ala Gly Pro Asn Gln Thr Phe			
275	280	285	
Glu Val Pro Asn Lys Ile Ile Asn Arg Ala Lys Glu Thr Leu Lys Ile			
290	295	300	
Asp Ile Leu His Lys Gln Ala Ser Gly Asn Ile Val Tyr Gly Val Phe			
305	310	315	320
Met Leu His Lys Lys Thr Val Asn Gln Lys Thr Thr Ile Tyr Glu Ile			
325	330	335	
Gln Asp Asp Arg Gly Lys Met Asp Val Val Gly Thr Gly Gln Cys His			
340	345	350	
Asn Ile Pro Cys Glu Glu Gly Asp Lys Leu Gln Leu Phe Cys Phe Arg			
355	360	365	
Leu Arg Lys Lys Asn Gln Met Ser Lys Leu Ile Ser Glu Met His Ser			
370	375	380	
Phe Ile Gln Ile Lys Lys Thr Asn Pro Arg Asn Asn Asp Pro Lys			
385	390	395	400
Ser Met Lys Leu Pro Gln Glu Gln Arg Gln Leu Pro Tyr Pro Ser Glu			
405	410	415	
Ala Ser Thr Thr Phe Pro Glu Ser His Leu Arg Thr Pro Gln Met Pro			
420	425	430	
Pro Thr Thr Pro Ser Ser Ser Phe Phe Thr Lys Lys Ser Glu Asp Thr			
435	440	445	
Ile Ser Lys Met Asn Asp Phe Met Arg Met Gln Ile Leu Lys Glu Gly			
450	455	460	
Ser His Phe Pro Gly Pro Phe Met Thr Ser Ile Gly Pro Ala Glu Ser			
465	470	475	480
His Pro His Thr Pro Gln Met Pro Pro Ser Thr Pro Ser Ser Ser Phe			
485	490	495	
Leu Thr Thr Leu Lys Pro Arg Leu Lys Thr Glu Pro Glu Glu Val Ser			
500	505	510	
Ile Glu Asp Ser Ala Gln Ser Asp Leu Lys Glu Val Met Val Leu Asn			
515	520	525	
Ala Thr Glu Ser Phe Val Tyr Glu Pro Lys Glu Gln Lys Lys Met Phe			
530	535	540	
His Ala Thr Val Ala Thr Glu Asn Glu Val Phe Arg Val Lys Val Phe			
545	550	555	560
Asn Ile Asp Leu Lys Glu Lys Phe Thr Pro Lys Lys Ile Ile Ala Ile			
565	570	575	
Ala Asn Tyr Val Cys Arg Asn Gly Phe Leu Glu Val Tyr Pro Phe Thr			
580	585	590	
Leu Val Ala Asp Val Asn Ala Asp Ala Asn Met Glu Ile Pro Lys Gly			
595	600	605	
Leu Ile Arg Ser Ala Ser Val Thr Pro Lys Ile Asn Gln Leu Cys Ser			
610	615	620	
Gln Thr Lys Gly Ser Phe Val Asn Gly Val Phe Glu Val His Lys Lys			
625	630	635	640
Asn Val Arg Gly Glu Phe Thr Tyr Tyr Glu Ile Gln Asp Asn Thr Gly			
645	650	655	
Lys Met Glu Val Val His Gly Arg Leu Asn Thr Ile Asn Cys Glu			
660	665	670	

Glu Gly Asp Lys Leu Lys Leu Thr Ser Phe Glu Leu Ala Pro Lys Ser
 675 680 685
 Gly Asn Thr Gly Glu Leu Arg Ser Val Ile His Ser His Ile Lys Val
 690 695 700
 Ile Lys Thr Lys Lys Asn Lys Lys Asp Ile Leu Asn Pro Asp Ser Ser
 705 710 715 720
 Met Glu Thr Ser Pro Asp Phe Phe Phe
 725

<210> 68
<211> 754
<212> PRT
<213> Homo Sapiens

<400> 68
Met Ala Ser Val Pro Ala Leu Gln Leu Thr Pro Ala Asn Pro Pro Pro
 1 5 10 15
Pro Glu Val Ser Asn Pro Lys Lys Pro Gly Arg Val Thr Asn Gln Leu
 20 25 30
Gln Tyr Leu His Lys Val Val Met Lys Ala Leu Trp Lys His Gln Phe
 35 40 45
Ala Trp Pro Phe Arg Gln Pro Val Asp Ala Val Lys Leu Gly Leu Pro
 50 55 60
Asp Tyr His Lys Ile Ile Lys Gln Pro Met Asp Met Gly Thr Ile Lys
 65 70 75 80
Arg Arg Leu Glu Asn Asn Tyr Tyr Trp Ala Ala Ser Glu Cys Met Gln
 85 90 95
Asp Phe Asn Thr Met Phe Thr Asn Cys Tyr Ile Tyr Asn Lys Pro Thr
 100 105 110
Asp Asp Ile Val Leu Met Ala Gln Thr Leu Glu Lys Ile Phe Leu Gln
 115 120 125
Lys Val Ala Ser Met Pro Gln Glu Glu Gln Glu Leu Val Val Thr Ile
 130 135 140
Pro Lys Asn Ser His Lys Lys Gly Ala Lys Leu Ala Ala Leu Gln Gly
 145 150 155 160
Ser Val Thr Ser Ala His Gln Val Pro Ala Val Ser Ser Val Ser His
 165 170 175
Thr Ala Leu Tyr Thr Pro Pro Pro Glu Ile Pro Thr Thr Val Leu Asn
 180 185 190
Ile Pro His Pro Ser Val Ile Ser Ser Pro Leu Leu Lys Ser Leu His
 195 200 205
Ser Ala Gly Pro Pro Leu Leu Ala Val Thr Ala Ala Pro Pro Ala Gln
 210 215 220
Pro Leu Ala Lys Lys Gly Val Lys Arg Lys Ala Asp Thr Thr Thr
 225 230 235 240
Pro Thr Pro Thr Ala Ile Leu Ala Pro Gly Ser Pro Ala Ser Pro Pro
 245 250 255
Gly Ser Leu Glu Pro Lys Ala Ala Arg Leu Pro Pro Met Arg Arg Glu
 260 265 270
Ser Gly Arg Pro Ile Lys Pro Pro Arg Lys Asp Leu Pro Asp Ser Gln
 275 280 285
Gln Gln His Gln Ser Ser Lys Lys Gly Lys Leu Ser Glu Gln Leu Lys
 290 295 300
His Cys Asn Gly Ile Leu Lys Glu Leu Leu Ser Lys Lys His Ala Ala
 305 310 315 320

Tyr Ala Trp Pro Phe Tyr Lys Pro Val Asp Ala Ser Ala Leu Gly Leu
 325 330 335
 His Asp Tyr His Asp Ile Ile Lys His Pro Met Asp Leu Ser Thr Val
 340 345 350
 Lys Arg Lys Met Glu Asn Arg Asp Tyr Arg Asp Ala Gln Glu Phe Ala
 355 360 365
 Ala Asp Val Arg Leu Met Phe Ser Asn Cys Tyr Lys Tyr Asn Pro Pro
 370 375 380
 Asp His Asp Val Val Ala Met Ala Arg Lys Leu Gln Asp Val Phe Glu
 385 390 395 400
 Phe Arg Tyr Ala Lys Met Pro Asp Glu Pro Leu Glu Pro Gly Pro Leu
 405 410 415
 Pro Val Ser Thr Ala Met Pro Pro Gly Leu Ala Lys Ser Ser Ser Glu
 420 425 430
 Ser Ser Ser Glu Glu Ser Ser Glu Ser Ser Ser Glu Glu Glu Glu
 435 440 445
 Glu Glu Asp Glu Glu Asp Glu Glu Glu Glu Ser Glu Ser Ser Asp
 450 455 460
 Ser Glu Glu Glu Arg Ala His Arg Leu Ala Glu Leu Gln Glu Gln Leu
 465 470 475 480
 Arg Ala Val His Glu Gln Leu Ala Ala Leu Ser Gln Gly Pro Ile Ser
 485 490 495
 Lys Pro Lys Arg Lys Arg Glu Lys Lys Glu Lys Lys Lys Arg Lys
 500 505 510
 Ala Glu Lys His Arg Gly Arg Ala Gly Ala Asp Glu Asp Asp Lys Gly
 515 520 525
 Pro Arg Ala Pro Arg Pro Pro Gln Pro Lys Lys Ser Lys Lys Ala Ser
 530 535 540
 Gly Ser Gly Gly Ser Ala Ala Leu Gly Pro Ser Gly Phe Gly Pro
 545 550 555 560
 Ser Gly Gly Ser Gly Thr Lys Leu Pro Lys Lys Ala Thr Lys Thr Ala
 565 570 575
 Pro Pro Ala Leu Pro Thr Gly Tyr Asp Ser Glu Glu Glu Glu Ser
 580 585 590
 Arg Pro Met Ser Tyr Asp Glu Lys Arg Gln Leu Ser Leu Asp Ile Asn
 595 600 605
 Lys Leu Pro Gly Glu Lys Leu Gly Arg Val Val His Ile Ile Gln Ala
 610 615 620
 Arg Glu Pro Ser Leu Arg Asp Ser Asn Pro Glu Glu Ile Glu Ile Asp
 625 630 635 640
 Phe Glu Thr Leu Lys Pro Ser Thr Leu Arg Glu Leu Glu Arg Tyr Val
 645 650 655
 Leu Ser Cys Leu Arg Lys Pro Arg Lys Pro Tyr Thr Ile Lys Lys
 660 665 670
 Pro Val Gly Lys Thr Lys Glu Glu Leu Ala Leu Glu Lys Lys Arg Glu
 675 680 685
 Leu Glu Lys Arg Leu Gln Asp Val Ser Gly Gln Leu Asn Ser Thr Lys
 690 695 700
 Lys Pro Pro Lys Lys Ala Asn Glu Lys Thr Glu Ser Ser Ser Ala Gln
 705 710 715 720
 Gln Val Ala Val Ser Arg Leu Ser Ala Ser Ser Ser Ser Asp Ser
 725 730 735
 Ser Ser Ser Ser Ser Ser Ser Ser Asp Thr Ser Asp Ser Asp
 740 745 750
 Ser Gly

<210> 69
<211> 210
<212> PRT
<213> Homo Sapiens

<400> 69

Met	Asp	Asp	Glu	Glu	Glu	Thr	Tyr	Arg	Leu	Trp	Lys	Ile	Arg	Lys	Thr
1			5					10				15			
Ile	Met	Gln	Leu	Cys	His	Asp	Arg	Gly	Tyr	Leu	Val	Thr	Gln	Asp	Glu
				20				25				30			
Leu	Asp	Gln	Thr	Leu	Glu	Glu	Phe	Lys	Ala	Gln	Phe	Gly	Asp	Lys	Pro
				35			40			45					
Ser	Glu	Gly	Arg	Pro	Arg	Arg	Thr	Asp	Leu	Thr	Val	Leu	Val	Ala	His
	50				55				60						
Asn	Asp	Asp	Pro	Thr	Asp	Gln	Met	Phe	Val	Phe	Phe	Pro	Glu	Glu	Pro
65					70				75			80			
Lys	Val	Gly	Ile	Lys	Thr	Ile	Lys	Val	Tyr	Cys	Gln	Arg	Met	Gln	Glu
				85				90			95				
Glu	Asn	Ile	Thr	Arg	Ala	Leu	Ile	Val	Val	Gln	Gln	Gly	Met	Thr	Pro
				100				105			110				
Ser	Ala	Lys	Gln	Ser	Leu	Val	Asp	Met	Ala	Pro	Lys	Tyr	Ile	Leu	Glu
				115				120			125				
Gln	Phe	Leu	Gln	Gln	Glu	Leu	Leu	Ile	Asn	Ile	Thr	Glu	His	Glu	Leu
	130				135				140						
Val	Pro	Glu	His	Val	Val	Met	Thr	Lys	Glu	Glu	Val	Thr	Glu	Leu	Leu
145					150				155			160			
Ala	Arg	Tyr	Lys	Leu	Arg	Glu	Asn	Gln	Leu	Pro	Arg	Ile	Gln	Ala	Gly
				165				170			175				
Asp	Pro	Val	Ala	Arg	Tyr	Phe	Gly	Ile	Lys	Arg	Gly	Gln	Val	Val	Lys
				180				185			190				
Ile	Ile	Arg	Pro	Ser	Glu	Thr	Ala	Gly	Arg	Tyr	Ile	Thr	Tyr	Arg	Leu
				195				200			205				
Val	Gln														
	210														

<210> 70
<211> 621
<212> PRT
<213> Homo Sapiens

<400> 70

Met	Leu	Leu	Leu	Pro	Ser	Ala	Ala	Glu	Gly	Gln	Gly	Thr	Ala	Ile	Thr
1				5				10				15			
His	Ala	Leu	Thr	Ser	Ala	Ser	Ser	Val	Cys	Gln	Val	Glu	Pro	Val	Gly
				20				25			30				
Arg	Trp	Phe	Glu	Ala	Phe	Val	Lys	Arg	Arg	Asn	Arg	Asn	Ala	Ser	Thr
				35				40			45				
Ser	Phe	Gln	Glu	Leu	Glu	Asp	Lys	Lys	Glu	Leu	Ser	Glu	Glu	Ser	Glu
		50			55				60						
Asp	Glu	Glu	Leu	Gln	Leu	Glu	Glu	Phe	Pro	Met	Leu	Lys	Thr	Leu	Asp
65					70				75			80			
Pro	Lys	Asp	Trp	Lys	Asn	Gln	Asp	His	Tyr	Ala	Val	Leu	Gly	Leu	Gly
				85				90			95				

His Val Arg Tyr Thr Ala Thr Gln Arg Gln Ile Lys Ala Ala His Lys
 100 105 110
 Ala Met Val Leu Lys His His Pro Asp Lys Arg Lys Ala Ala Gly Glu
 115 120 125
 Pro Ile Lys Glu Gly Asp Asn Asp Tyr Phe Thr Cys Ile Thr Lys Ala
 130 135 140
 Tyr Glu Met Leu Ser Asp Pro Val Lys Arg Arg Ala Phe Asn Ser Val
 145 150 155 160
 Asp Pro Thr Phe Asp Asn Ser Val Pro Ser Lys Ser Glu Ala Lys Asp
 165 170 175
 Asn Phe Phe Gln Val Phe Ser Pro Val Phe Glu Arg Asn Ser Arg Trp
 180 185 190
 Ser Asn Lys Lys Asn Val Pro Lys Leu Gly Asp Met Asn Ser Ser Phe
 195 200 205
 Glu Asp Val Asp Ala Phe Tyr Ser Phe Trp Tyr Asn Phe Asp Ser Trp
 210 215 220
 Arg Glu Phe Ser Tyr Leu Asp Glu Glu Glu Lys Glu Lys Ala Glu Cys
 225 230 235 240
 Arg Asp Glu Arg Lys Trp Ile Glu Lys Gln Asn Arg Ala Thr Arg Ala
 245 250 255
 Gln Arg Lys Lys Glu Glu Met Asn Arg Ile Arg Thr Leu Val Asp Asn
 260 265 270
 Ala Tyr Ser Cys Asp Pro Arg Ile Lys Lys Phe Lys Glu Glu Glu Lys
 275 280 285
 Ala Lys Lys Glu Ala Glu Lys Lys Ala Lys Ala Glu Ala Arg Arg Lys
 290 295 300
 Glu Gln Glu Ala Lys Glu Lys Gln Arg Gln Ala Glu Leu Glu Ala Val
 305 310 315 320
 Arg Leu Ala Lys Glu Lys Glu Glu Glu Val Arg Gln Gln Ala Leu
 325 330 335
 Leu Ala Lys Lys Glu Lys Asp Ile Gln Lys Lys Ala Ile Lys Lys Glu
 340 345 350
 Arg Gln Lys Leu Arg Asn Ser Cys Lys Ser Trp Asn His Phe Ser Asp
 355 360 365
 Asn Glu Ala Asp Arg Val Lys Met Met Glu Glu Val Glu Lys Leu Cys
 370 375 380
 Asp Arg Leu Glu Leu Ala Ser Leu Gln Gly Leu Asn Glu Ile Leu Ala
 385 390 395 400
 Ser Ser Thr Arg Glu Val Gly Lys Ala Ala Leu Glu Lys Gln Ile Glu
 405 410 415
 Glu Val Asn Glu Gln Met Arg Arg Glu Lys Glu Glu Ala Asp Ala Arg
 420 425 430
 Met Arg Gln Ala Ser Lys Asn Ala Glu Lys Ser Thr Gly Gly Ser Gly
 435 440 445
 Ser Gly Ser Lys Asn Trp Ser Glu Asp Asp Leu Gln Leu Leu Ile Lys
 450 455 460
 Ala Val Asn Leu Phe Pro Ala Gly Thr Asn Ser Arg Trp Glu Val Ile
 465 470 475 480
 Ala Asn Tyr Met Asn Ile His Ser Ser Ser Gly Val Lys Arg Thr Ala
 485 490 495
 Lys Asp Val Ile Ser Lys Ala Lys Ser Leu Gln Lys Leu Asp Pro His
 500 505 510
 Gln Lys Asp Asp Ile Asn Lys Lys Ala Phe Asp Lys Phe Lys Lys Glu
 515 520 525
 His Gly Val Ala Ser Gln Ala Asp Ser Ala Ala Pro Ser Glu Arg Phe

530	535	540
Glu	Gly	Pro Cys Ile Asp Ser Thr Pro Trp Thr Thr Glu Glu Gln Lys
545	550	555
Leu	Leu	Glu Gln Ala Leu Lys Thr Tyr Pro Val Asn Thr Pro Glu Arg
		565
Trp	Glu	Lys Ile Ala Glu Ala Val Pro Gly Arg Thr Lys Lys Asp Cys
		580
Met	Arg	Arg Tyr Lys Glu Leu Val Glu Met Val Lys Ala Lys Lys Ala
		595
Ala	Gln	Gln Val Leu Asn Ala Ser Arg Ala Arg Lys
610	615	620

<210> 71
<211> 267
<212> PRT
<213> Homo Sapiens

<400> 71		
Met	Ala	Ser Leu Leu Lys Val Asp Gln Glu Val Lys Leu Lys Val Asp
1	5	10
Ser	Phe	Arg Glu Arg Ile Thr Ser Lys Ala Glu Asp Leu Val Ala Asn
	20	25
Phe	Phe	Pro Lys Lys Leu Leu Glu Leu Asp Ser Phe Leu Lys Glu Pro
	35	40
Ile	Leu	Asn Ile His Asp Leu Thr Gln Ile His Ser Asp Met Asn Leu
	50	55
Pro	Val	Pro Asp Pro Ile Leu Leu Thr Asn Ser His Asp Gly Leu Asp
65	70	75
Gly	Pro	Thr Tyr Lys Lys Arg Arg Leu Asp Glu Cys Glu Ala Phe
	85	90
Gln	Gly	Thr Lys Val Phe Val Met Pro Asn Gly Met Leu Lys Ser Asn
	100	105
Gln	Gln	Leu Val Asp Ile Ile Glu Lys Val Lys Pro Glu Ile Arg Leu
	115	120
Leu	Ile	Glu Lys Cys Asn Thr Pro Ser Gly Lys Gly Pro His Ile Cys
	130	135
Phe	Asp	Leu Gln Val Lys Met Trp Val Gln Leu Leu Ile Pro Arg Ile
145	150	155
Glu	Asp	Gly Asn Asn Phe Gly Val Ser Ile Gln Glu Glu Thr Val Ala
	165	170
Glu	Leu	Arg Thr Val Glu Ser Glu Ala Ala Ser Tyr Leu Asp Gln Ile
	180	185
Ser	Arg	Tyr Tyr Ile Thr Arg Ala Lys Leu Val Ser Lys Ile Ala Lys
	195	200
Tyr	Pro	His Val Glu Asp Tyr Arg Arg Thr Val Thr Glu Ile Asp Glu
	210	215
Lys	Glu	Tyr Ile Ser Leu Arg Leu Ile Ile Ser Glu Leu Arg Asn Gln
225	230	235
Tyr	Val	Thr Leu His Asp Met Ile Leu Lys Asn Ile Glu Lys Ile Lys
	245	250
Arg	Pro	Arg Ser Ser Asn Ala Glu Thr Leu Tyr
	260	265

<210> 72
<211> 1752

<212> PRT
 <213> Homo Sapiens

<400> 72

Arg Glu Lys Arg Arg Arg Lys Ser Val Glu Asp Arg Phe Asp Gln Gln
 1 5 10 15
 Lys Asn Asp Tyr Asp Gln Leu Gln Lys Ala Arg Gln Cys Glu Lys Glu
 20 25 30
 Asn Leu Gly Trp Gln Lys Leu Glu Ser Glu Lys Ala Ile Lys Glu Lys
 35 40 45
 Glu Tyr Glu Ile Glu Arg Leu Arg Val Leu Leu Gln Glu Glu Gly Thr
 50 55 60
 Arg Lys Arg Glu Tyr Glu Asn Glu Leu Ala Lys Val Arg Asn His Tyr
 65 70 75 80
 Asn Glu Glu Met Ser Asn Leu Arg Asn Lys Tyr Glu Thr Glu Ile Asn
 85 90 95
 Ile Thr Lys Thr Thr Ile Lys Glu Ile Ser Met Gln Lys Glu Asp Asp
 100 105 110
 Ser Lys Asn Leu Arg Asn Gln Leu Asp Arg Leu Ser Arg Glu Asn Arg
 115 120 125
 Asp Leu Lys Asp Glu Ile Val Arg Leu Asn Asp Ser Ile Leu Gln Ala
 130 135 140
 Thr Glu Gln Arg Arg Arg Ala Glu Glu Asn Ala Leu Gln Gln Lys Ala
 145 150 155 160
 Cys Gly Ser Glu Ile Met Gln Lys Lys Gln His Leu Glu Ile Glu Leu
 165 170 175
 Lys Gln Val Met Gln Gln Arg Ser Glu Asp Asn Ala Arg His Lys Gln
 180 185 190
 Ser Leu Glu Glu Ala Ala Lys Thr Ile Gln Asp Lys Asn Lys Glu Ile
 195 200 205
 Glu Arg Leu Lys Ala Glu Phe Gln Glu Glu Ala Lys Arg Arg Trp Glu
 210 215 220
 Tyr Glu Asn Glu Leu Ser Lys Val Arg Asn Asn Tyr Asp Glu Glu Ile
 225 230 235 240
 Ile Ser Leu Lys Asn Gln Phe Glu Thr Glu Ile Asn Ile Thr Lys Thr
 245 250 255
 Thr Ile His Gln Leu Thr Met Gln Lys Glu Glu Asp Thr Ser Gly Tyr
 260 265 270
 Arg Ala Gln Ile Asp Asn Leu Thr Arg Glu Asn Arg Ser Leu Ser Glu
 275 280 285
 Glu Ile Lys Arg Leu Lys Asn Thr Leu Thr Gln Thr Thr Glu Asn Leu
 290 295 300
 Arg Arg Val Glu Glu Asp Ile Gln Gln Gln Lys Ala Thr Gly Ser Glu
 305 310 315 320
 Val Ser Gln Arg Lys Gln Gln Leu Glu Val Glu Leu Arg Gln Val Thr
 325 330 335
 Gln Met Arg Thr Glu Glu Ser Val Arg Tyr Lys Gln Ser Leu Asp Asp
 340 345 350
 Ala Ala Lys Thr Ile Gln Asp Lys Asn Lys Glu Ile Glu Arg Leu Lys
 355 360 365
 Gln Leu Ile Asp Lys Glu Thr Asn Asp Arg Lys Cys Leu Glu Asp Glu
 370 375 380
 Asn Ala Arg Leu Gln Arg Val Gln Tyr Asp Leu Gln Lys Ala Asn Ser
 385 390 395 400
 Ser Ala Thr Glu Thr Ile Asn Lys Leu Lys Val Ser Glu Gln Glu Leu

405	410	415
Thr Arg Leu Arg Ile Asp Tyr Glu Arg Val Ser Gln Glu Arg Thr Val		
420	425	430
Lys Asp Gln Asp Ile Thr Arg Phe Gln Asn Ser Leu Lys Glu Leu Gln		
435	440	445
Leu Gln Lys Gln Lys Val Glu Glu Glu Leu Asn Arg Leu Lys Arg Thr		
450	455	460
Ala Ser Glu Asp Ser Cys Lys Arg Lys Lys Leu Glu Glu Leu Glu		
465	470	475
Gly Met Arg Arg Ser Leu Lys Glu Gln Ala Ile Lys Ile Thr Asn Leu		
485	490	495
Thr Gln Gln Leu Glu Gln Ala Ser Ile Val Lys Lys Arg Ser Glu Asp		
500	505	510
Asp Leu Arg Gln Gln Arg Asp Val Leu Asp Gly His Leu Arg Glu Lys		
515	520	525
Gln Arg Thr Gln Glu Glu Leu Arg Arg Leu Ser Ser Glu Val Glu Ala		
530	535	540
Leu Arg Arg Gln Leu Leu Gln Glu Ser Val Lys Gln Ala His		
545	550	555
Leu Arg Asn Glu His Phe Gln Lys Ala Ile Glu Asp Lys Ser Arg Ser		
565	570	575
Leu Asn Glu Ser Lys Ile Glu Ile Glu Arg Leu Gln Ser Leu Thr Glu		
580	585	590
Asn Leu Thr Lys Glu His Leu Met Leu Glu Glu Leu Arg Asn Leu		
595	600	605
Arg Leu Glu Tyr Asp Asp Leu Arg Arg Gly Arg Ser Glu Ala Asp Ser		
610	615	620
Asp Lys Asn Ala Thr Ile Leu Glu Leu Arg Ser Gln Leu Gln Ile Ser		
625	630	635
Asn Asn Arg Thr Leu Glu Leu Gln Gly Leu Ile Asn Asp Leu Gln Arg		
645	650	655
Glu Arg Glu Asn Leu Arg Gln Glu Ile Glu Lys Phe Gln Lys Gln Ala		
660	665	670
Leu Glu Ala Ser Asn Arg Ile Gln Glu Ser Lys Asn Gln Cys Thr Gln		
675	680	685
Val Val Gln Glu Arg Glu Ser Leu Leu Val Lys Ile Lys Val Leu Glu		
690	695	700
Gln Asp Lys Ala Arg Leu Gln Arg Leu Glu Asp Glu Leu Asn Arg Ala		
705	710	715
Lys Ser Thr Leu Glu Ala Glu Thr Arg Val Lys Gln Arg Leu Glu Cys		
725	730	735
Glu Lys Gln Gln Ile Gln Asn Asp Leu Asn Gln Trp Lys Thr Gln Tyr		
740	745	750
Ser Arg Lys Glu Glu Ala Ile Arg Lys Ile Glu Ser Glu Arg Glu Lys		
755	760	765
Ser Glu Arg Glu Lys Asn Ser Leu Arg Ser Glu Ile Glu Arg Leu Gln		
770	775	780
Ala Glu Ile Lys Arg Ile Glu Glu Arg Cys Arg Arg Lys Leu Glu Asp		
785	790	795
Ser Thr Arg Glu Thr Gln Ser Gln Leu Glu Thr Glu Arg Ser Arg Tyr		
805	810	815
Gln Arg Glu Ile Asp Lys Leu Arg Gln Arg Pro Tyr Gly Ser His Arg		
820	825	830
Glu Thr Gln Thr Glu Cys Glu Trp Thr Val Asp Thr Ser Lys Leu Val		
835	840	845

Phe Asp Gly Leu Arg Lys Lys Val Thr Ala Met Gln Leu Tyr Glu Cys
 850 855 860
 Gln Leu Ile Asp Lys Thr Thr Leu Asp Lys Leu Leu Lys Gly Lys Lys
 865 870 875 880
 Ser Val Glu Glu Val Ala Ser Glu Ile Gln Pro Phe Leu Arg Gly Ala
 885 890 895
 Gly Ser Ile Ala Gly Ala Ser Ala Ser Pro Lys Glu Lys Tyr Ser Leu
 900 905 910
 Val Glu Ala Lys Arg Lys Lys Leu Ile Ser Pro Glu Ser Thr Val Met
 915 920 925
 Leu Leu Glu Ala Gln Ala Ala Thr Gly Gly Ile Ile Asp Pro His Arg
 930 935 940
 Asn Glu Lys Leu Thr Val Asp Ser Ala Ile Ala Arg Asp Leu Ile Asp
 945 950 955 960
 Phe Asp Asp Arg Gln Gln Ile Tyr Ala Ala Glu Lys Ala Ile Thr Gly
 965 970 975
 Phe Asp Asp Pro Phe Ser Gly Lys Thr Val Ser Val Ser Glu Ala Ile
 980 985 990
 Lys Lys Asn Leu Ile Asp Arg Glu Thr Gly Met Arg Leu Leu Glu Ala
 995 1000 1005
 Gln Ile Ala Ser Gly Gly Val Val Asp Pro Val Asn Ser Val Phe Leu
 1010 1015 1020
 Pro Lys Asp Val Ala Leu Ala Arg Gly Leu Ile Asp Arg Asp Leu Tyr
 1025 1030 1035 104
 Arg Ser Leu Asn Asp Pro Arg Asp Ser Gln Lys Asn Phe Val Asp Pro
 1045 1050 1055
 Val Thr Lys Lys Val Ser Tyr Val Gln Leu Lys Glu Arg Cys Arg
 1060 1065 1070
 Ile Glu Pro His Thr Gly Leu Leu Leu Ser Val Gln Lys Arg Ser
 1075 1080 1085
 Met Ser Phe Gln Gly Ile Arg Gln Pro Val Thr Val Thr Glu Leu Val
 1090 1095 1100
 Asp Ser Gly Ile Leu Arg Pro Ser Thr Val Asn Glu Leu Glu Ser Gly
 1105 1110 1115 112
 Gln Ile Ser Tyr Asp Glu Val Gly Glu Arg Ile Lys Asp Phe Leu Gln
 1125 1130 1135
 Gly Ser Ser Cys Ile Ala Gly Ile Tyr Asn Glu Thr Thr Lys Gln Lys
 1140 1145 1150
 Leu Gly Ile Tyr Glu Ala Met Lys Ile Gly Leu Val Arg Pro Gly Thr
 1155 1160 1165
 Ala Leu Glu Leu Leu Glu Ala Gln Ala Ala Thr Gly Phe Ile Val Asp
 1170 1175 1180
 Pro Val Ser Asn Leu Arg Leu Pro Val Glu Glu Ala Tyr Lys Arg Gly
 1185 1190 1195 120
 Leu Val Gly Ile Glu Phe Lys Glu Lys Leu Leu Ser Ala Glu Arg Ala
 1205 1210 1215
 Val Thr Gly Tyr Asn Asp Pro Glu Thr Gly Asn Ile Ile Ser Leu Phe
 1220 1225 1230
 Gln Ala Met Asn Lys Glu Leu Ile Glu Lys Gly His Gly Ile Arg Leu
 1235 1240 1245
 Leu Glu Ala Gln Ile Ala Thr Gly Gly Ile Ile Asp Pro Lys Glu Ser
 1250 1255 1260
 His Arg Leu Pro Val Asp Ile Ala Tyr Lys Arg Gly Tyr Phe Asn Glu
 1265 1270 1275 128
 Glu Leu Ser Glu Ile Leu Ser Asp Pro Ser Asp Asp Thr Lys Gly Phe

1285	1290	1295
Phe Asp Pro Asn Thr Glu Glu Asn Leu Thr Tyr Leu Gln Leu Lys Glu		
1300	1305	1310
Arg Cys Ile Lys Asp Glu Glu Thr Gly Leu Cys Leu Leu Pro Leu Lys		
1315	1320	1325
Glu Lys Lys Lys Gln Val Gln Thr Ser Gln Lys Asn Thr Leu Arg Lys		
1330	1335	1340
Arg Arg Val Val Ile Val Asp Pro Glu Thr Asn Lys Glu Met Ser Val		
1345	1350	1355
Gln Glu Ala Tyr Lys Lys Gly Leu Ile Asp Tyr Glu Thr Phe Lys Glu		
1365	1370	1375
Leu Cys Glu Gln Glu Cys Glu Trp Glu Glu Ile Thr Ile Thr Gly Ser		
1380	1385	1390
Asp Gly Ser Thr Arg Val Val Leu Val Asp Arg Lys Thr Gly Ser Gln		
1395	1400	1405
Tyr Asp Ile Gln Asp Ala Ile Asp Lys Gly Leu Val Asp Arg Lys Phe		
1410	1415	1420
Phe Asp Gln Tyr Arg Ser Gly Ser Leu Ser Leu Thr Gln Phe Ala Asp		
1425	1430	1435
Met Ile Ser Leu Lys Asn Gly Val Gly Thr Ser Ser Ser Met Gly Ser		
1445	1450	1455
Gly Val Ser Asp Asp Val Phe Ser Ser Arg His Glu Ser Val Ser		
1460	1465	1470
Lys Ile Ser Thr Ile Ser Ser Val Arg Asn Leu Thr Ile Arg Ser Ser		
1475	1480	1485
Ser Phe Ser Asp Thr Leu Glu Ser Ser Pro Ile Ala Ala Ile Phe		
1490	1495	1500
Asp Thr Glu Asn Leu Glu Lys Ile Ser Ile Thr Glu Gly Ile Glu Arg		
1505	1510	1515
Gly Ile Val Asp Ser Ile Thr Gly Gln Arg Leu Leu Glu Ala Gln Ala		
1525	1530	1535
Cys Thr Gly Gly Ile Ile His Pro Thr Thr Gly Gln Lys Leu Ser Leu		
1540	1545	1550
Gln Asp Ala Val Ser Gln Gly Val Ile Asp Gln Asp Met Ala Thr Ser		
1555	1560	1565
Val Lys Pro Ala Gln Lys Ala Phe Ile Gly Phe Glu Gly Val Lys Gly		
1570	1575	1580
Lys Lys Lys Met Ser Ala Ala Glu Ala Val Lys Glu Lys Trp Leu Pro		
1585	1590	1595
Tyr Glu Ala Gly Gln Arg Phe Leu Glu Phe Gln Tyr Leu Thr Gly Gly		
1605	1610	1615
Leu Val Asp Pro Glu Val His Gly Arg Ile Ser Thr Glu Glu Ala Ile		
1620	1625	1630
Arg Lys Gly Phe Ile Asp Gly Arg Ala Ala Gln Arg Leu Gln Asp Thr		
1635	1640	1645
Ser Ser Tyr Ala Lys Ile Leu Thr Cys Pro Lys Thr Lys Leu Lys Ile		
1650	1655	1660
Ser Tyr Lys Asp Ala Ile Asn Arg Ser Met Val Glu Asp Ile Thr Gly		
1665	1670	1675
Leu Arg Leu Leu Glu Ala Ala Ser Val Ser Ser Lys Gly Leu Pro Ser		
1685	1690	1695
Pro Tyr Asn Met Ser Ser Ala Pro Gly Ser Arg Ser Gly Ser Arg Ser		
1700	1705	1710
Gly Ser Arg Ser Gly Ser Arg Ser Gly Ser Arg Ser Gly Ser Arg Arg		
1715	1720	1725

Gly Ser Phe Asp Ala Thr Gly Asn Ser Ser Tyr Ser Tyr Ser Tyr Ser
 1730 1735 1740
 Phe Ser Ser Ser Ile Gly His
 1745 1750

<210> 73
<211> 1978
<212> PRT
<213> Homo Sapiens

<400> 73
Met Ser Arg Pro Arg Phe Asn Pro Arg Gly Asp Phe Pro Leu Gln Arg
 1 5 10 15
Pro Arg Ala Pro Asn Pro Ser Gly Met Arg Pro Pro Gly Pro Phe Met
 20 25 30
Arg Pro Gly Ser Met Gly Leu Pro Arg Phe Tyr Pro Ala Gly Arg Ala
 35 40 45
Arg Gly Ile Pro His Arg Phe Ala Gly Leu Glu Ser Tyr Gln Asn Met
 50 55 60
Gly Pro Gln Arg Met Asn Val Gln Val Thr Gln His Arg Thr Asp Pro
 65 70 75 80
Arg Leu Thr Lys Glu Lys Leu Asp Phe His Glu Ala Gln Gln Lys Lys
 85 90 95
Gly Lys Pro His Gly Ser Arg Trp Asp Asp Glu Pro His Ile Ser Ala
 100 105 110
Ser Val Ala Val Lys Gln Ser Ser Val Thr Gln Val Thr Glu Gln Ser
 115 120 125
Pro Lys Val Gln Ser Arg Tyr Thr Lys Glu Ser Ala Ser Ser Ile Leu
 130 135 140
Ala Ser Phe Gly Leu Ser Asn Glu Asp Leu Glu Glu Leu Ser Arg Tyr
 145 150 155 160
Pro Asp Glu Gln Leu Thr Pro Glu Asn Met Pro Leu Ile Leu Arg Asp
 165 170 175
Ile Arg Met Arg Lys Met Gly Arg Arg Leu Pro Asn Leu Pro Ser Gln
 180 185 190
Ser Arg Asn Lys Glu Thr Leu Gly Ser Glu Ala Val Ser Ser Asn Val
 195 200 205
Ile Asp Tyr Gly His Ala Ser Lys Tyr Gly Tyr Thr Glu Asp Pro Leu
 210 215 220
Glu Val Arg Ile Tyr Asp Pro Glu Ile Pro Thr Asp Glu Val Glu Asn
 225 230 235 240
Glu Phe Gln Ser Gln Gln Asn Ile Ser Ala Ser Val Pro Asn Pro Asn
 245 250 255
Val Ile Cys Asn Ser Met Phe Pro Val Glu Asp Val Phe Arg Gln Met
 260 265 270
Asp Phe Pro Gly Glu Ser Ser Asn Asn Arg Ser Phe Phe Ser Val Glu
 275 280 285
Ser Gly Thr Lys Met Ser Gly Leu His Ile Ser Gly Gly Gln Ser Val
 290 295 300
Leu Glu Pro Ile Lys Ser Val Asn Gln Ser Ile Asn Gln Thr Val Ser
 305 310 315 320
Gln Thr Met Ser Gln Ser Leu Ile Pro Pro Ser Met Asn Gln Gln Pro
 325 330 335
Phe Ser Ser Glu Leu Ile Ser Ser Val Ser Gln Gln Glu Arg Ile Pro
 340 345 350

His Glu Pro Val Ile Asn Ser Ser Asn Val His Val Gly Ser Arg Gly
 355 360 365
 Ser Lys Lys Asn Tyr Gln Ser Gln Ala Asp Ile Pro Ile Arg Ser Pro
 370 375 380
 Phe Gly Ile Val Lys Ala Ser Trp Leu Pro Lys Phe Ser His Ala Asp
 385 390 395 400
 Ala Gln Lys Met Lys Arg Leu Pro Thr Pro Ser Met Met Asn Asp Tyr
 405 410 415
 Tyr Ala Ala Ser Pro Arg Ile Phe Pro His Leu Cys Ser Leu Cys Asn
 420 425 430
 Val Glu Cys Ser His Leu Lys Asp Trp Ile Gln His Gln Asn Thr Ser
 435 440 445
 Thr His Ile Glu Ser Cys Arg Gln Leu Arg Gln Gln Tyr Pro Asp Trp
 450 455 460
 Asn Pro Glu Ile Leu Pro Ser Arg Arg Asn Glu Gly Asn Arg Lys Glu
 465 470 475 480
 Asn Glu Thr Pro Arg Arg Ser His Ser Pro Ser Pro Arg Arg Ser
 485 490 495
 Arg Arg Ser Ser Ser His Arg Phe Arg Arg Ser Arg Ser Pro Met
 500 505 510
 His Tyr Met Tyr Arg Pro Arg Ser Arg Ser Pro Arg Ile Cys His Arg
 515 520 525
 Phe Ile Ser Arg Tyr Arg Ser Arg Ser Arg Ser Pro Tyr Arg
 530 535 540
 Ile Arg Asn Pro Phe Arg Gly Ser Pro Lys Cys Phe Arg Ser Val Ser
 545 550 555 560
 Pro Glu Arg Met Ser Arg Arg Ser Val Arg Ser Ser Asp Arg Lys Lys
 565 570 575
 Ala Leu Glu Asp Val Val Gln Arg Ser Gly His Gly Thr Glu Phe Asn
 580 585 590
 Lys Gln Lys His Leu Glu Ala Ala Asp Lys Gly His Ser Pro Ala Gln
 595 600 605
 Lys Pro Lys Thr Ser Ser Gly Thr Lys Pro Ser Val Lys Pro Thr Ser
 610 615 620
 Ala Thr Lys Ser Asp Ser Asn Leu Gly Gly His Ser Ile Arg Cys Lys
 625 630 635 640
 Ser Lys Asn Leu Glu Asp Asp Thr Leu Ser Glu Cys Lys Gln Val Ser
 645 650 655
 Asp Lys Ala Val Ser Leu Gln Arg Lys Leu Arg Lys Glu Gln Ser Leu
 660 665 670
 His Tyr Gly Ser Val Leu Leu Ile Thr Glu Leu Pro Glu Asp Gly Cys
 675 680 685
 Thr Glu Glu Asp Val Arg Lys Leu Phe Gln Pro Phe Gly Lys Val Asn
 690 695 700
 Asp Val Leu Ile Val Pro Tyr Arg Lys Glu Ala Tyr Leu Glu Met Glu
 705 710 715 720
 Phe Lys Glu Ala Ile Thr Ala Ile Met Lys Tyr Ile Glu Thr Thr Pro
 725 730 735
 Leu Thr Ile Lys Gly Lys Ser Val Lys Ile Cys Val Pro Gly Lys Lys
 740 745 750
 Lys Ala Gln Asn Lys Glu Val Lys Lys Lys Thr Leu Glu Ser Lys Lys
 755 760 765
 Val Ser Ala Ser Thr Leu Lys Arg Asp Ala Asp Ala Ser Lys Ala Val
 770 775 780
 Glu Ile Val Thr Ser Thr Ser Ala Ala Lys Thr Gly Gln Ala Lys Ala

785	790	795	800
Cys Val Ala Lys Val Asn Lys Ser Thr Gly Lys Ser Ala Ser Ser Val			
805	810	815	
Lys Ser Val Val Thr Val Ala Val Lys Gly Asn Lys Ala Ser Ile Lys			
820	825	830	
Thr Ala Lys Ser Gly Gly Lys Lys Ser Leu Glu Ala Lys Lys Thr Gly			
835	840	845	
Asn Val Lys Asn Lys Asp Ser Asn Lys Pro Val Thr Ile Pro Glu Asn			
850	855	860	
Ser Glu Ile Lys Thr Ser Ile Glu Val Lys Ala Thr Glu Asn Cys Ala			
865	870	875	880
Lys Glu Ala Ile Ser Asp Ala Ala Leu Glu Ala Thr Glu Asn Glu Pro			
885	890	895	
Leu Asn Lys Glu Thr Glu Glu Met Cys Val Met Leu Val Ser Asn Leu			
900	905	910	
Pro Asn Lys Gly Tyr Ser Val Glu Glu Val Tyr Asp Leu Ala Lys Pro			
915	920	925	
Phe Gly Gly Leu Lys Asp Ile Leu Ile Leu Ser Ser His Lys Lys Ala			
930	935	940	
Tyr Ile Glu Ile Asn Arg Lys Ala Ala Glu Ser Met Val Lys Phe Tyr			
945	950	955	960
Thr Cys Phe Pro Val Leu Met Asp Gly Asn Gln Leu Ser Ile Ser Met			
965	970	975	
Ala Pro Glu Asn Met Asn Ile Lys Asp Glu Glu Ala Ile Phe Ile Thr			
980	985	990	
Leu Val Lys Glu Asn Asp Pro Glu Ala Asn Ile Asp Thr Ile Tyr Asp			
995	1000	1005	
Arg Phe Val His Leu Asp Asn Leu Pro Glu Asp Gly Leu Gln Cys Val			
1010	1015	1020	
Leu Cys Val Gly Leu Gln Phe Gly Lys Val Asp His His Val Phe Ile			
1025	1030	1035	104
Ser Asn Arg Asn Lys Ala Ile Leu Gln Leu Asp Ser Pro Glu Ser Ala			
1045	1050	1055	
Gln Ser Met Tyr Ser Phe Leu Lys Gln Asn Pro Gln Asn Ile Gly Asp			
1060	1065	1070	
His Met Leu Thr Cys Ser Leu Ser Pro Lys Ile Asp Leu Pro Glu Val			
1075	1080	1085	
Gln Ile Glu His Asp Pro Glu Leu Glu Lys Glu Ser Pro Gly Leu Lys			
1090	1095	1100	
Asn Ser Pro Ile Asp Glu Ser Glu Val Gln Thr Ala Thr Asp Ser Pro			
1105	1110	1115	112
Ser Val Lys Pro Asn Glu Leu Glu Glu Ser Thr Pro Ser Ile Gln			
1125	1130	1135	
Thr Glu Thr Leu Val Gln Gln Glu Glu Pro Cys Glu Glu Ala Glu			
1140	1145	1150	
Lys Ala Thr Cys Asp Ser Asp Phe Ala Val Glu Thr Leu Glu Leu Glu			
1155	1160	1165	
Thr Gln Gly Glu Glu Val Lys Glu Glu Ile Pro Leu Val Ala Ser Ala			
1170	1175	1180	
Ser Val Ser Ile Glu Gln Phe Thr Glu Asn Ala Glu Glu Cys Ala Leu			
1185	1190	1195	120
Asn Gln Gln Met Phe Asn Ser Asp Leu Glu Lys Lys Gly Ala Glu Ile			
1205	1210	1215	
Ile Asn Pro Lys Thr Ala Leu Leu Pro Ser Asp Ser Val Phe Ala Glu			
1220	1225	1230	

Glu Arg Asn Leu Lys Gly Ile Leu Glu Glu Ser Pro Ser Glu Ala Glu
 1235 1240 1245
 Asp Phe Ile Ser Gly Ile Thr Gln Thr Met Val Glu Ala Val Ala Glu
 1250 1255 1260
 Val Glu Lys Asn Glu Thr Val Ser Glu Ile Leu Pro Ser Thr Cys Ile
 1265 1270 1275 128
 Val Thr Leu Val Pro Gly Ile Pro Thr Gly Asp Glu Lys Thr Val Asp
 1285 1290 1295
 Lys Lys Asn Ile Ser Glu Lys Lys Gly Asn Met Asp Glu Lys Glu Glu
 1300 1305 1310
 Lys Glu Phe Asn Thr Lys Glu Thr Arg Met Asp Leu Gln Ile Gly Thr
 1315 1320 1325
 Glu Lys Ala Glu Lys Asn Glu Gly Arg Met Asp Ala Glu Lys Val Glu
 1330 1335 1340
 Lys Met Ala Ala Met Lys Glu Lys Pro Ala Glu Asn Thr Leu Phe Lys
 1345 1350 1355 136
 Ala Tyr Pro Asn Lys Gly Val Gly Gln Ala Asn Lys Pro Asp Glu Thr
 1365 1370 1375
 Ser Lys Thr Ser Ile Leu Ala Val Ser Asp Val Ser Ser Lys Pro
 1380 1385 1390
 Ser Ile Lys Ala Val Ile Val Ser Ser Pro Lys Ala Lys Ala Thr Val
 1395 1400 1405
 Ser Lys Thr Glu Asn Gln Lys Ser Phe Pro Lys Ser Val Pro Arg Asp
 1410 1415 1420
 Gln Ile Asn Ala Glu Lys Lys Leu Ser Ala Lys Glu Phe Gly Leu Leu
 1425 1430 1435 144
 Lys Pro Thr Ser Ala Arg Ser Gly Leu Ala Glu Ser Ser Lys Phe
 1445 1450 1455
 Lys Pro Thr Gln Ser Ser Leu Thr Arg Gly Ser Gly Arg Ile Ser
 1460 1465 1470
 Ala Leu Gln Gly Lys Leu Ser Lys Leu Asp Tyr Arg Asp Ile Thr Lys
 1475 1480 1485
 Gln Ser Gln Glu Thr Glu Ala Arg Pro Ser Ile Met Lys Arg Asp Asp
 1490 1495 1500
 Ser Asn Asn Lys Thr Leu Ala Glu Gln Asn Thr Lys Asn Pro Lys Ser
 1505 1510 1515 152
 Thr Thr Gly Arg Ser Ser Lys Ser Lys Glu Glu Pro Leu Phe Pro Phe
 1525 1530 1535
 Asn Leu Asp Glu Phe Val Thr Val Asp Glu Val Ile Glu Glu Val Asn
 1540 1545 1550
 Pro Ser Gln Ala Lys Gln Asn Pro Leu Lys Gly Lys Arg Lys Glu Thr
 1555 1560 1565
 Leu Lys Asn Val Pro Phe Ser Glu Leu Asn Leu Lys Lys Lys Gly
 1570 1575 1580
 Lys Thr Ser Thr Pro Arg Gly Val Glu Gly Glu Leu Ser Phe Val Thr
 1585 1590 1595 160
 Leu Asp Glu Ile Gly Glu Glu Asp Ala Ala Ala His Leu Ala Gln
 1605 1610 1615
 Ala Leu Val Thr Val Asp Glu Val Ile Asp Glu Glu Glu Leu Asn Met
 1620 1625 1630
 Glu Glu Met Val Lys Asn Ser Asn Ser Leu Phe Thr Leu Asp Glu Leu
 1635 1640 1645
 Ile Asp Gln Asp Asp Cys Ile Ser His Ser Glu Pro Lys Asp Val Thr
 1650 1655 1660
 Val Leu Ser Val Ala Glu Glu Gln Asp Leu Leu Lys Gln Glu Arg Leu

1665	1670	1675	168
Val Thr Val Asp Glu Ile Gly Glu Val Glu Glu Leu Pro Leu Asn Glu			
1685		1690	1695
Ser Ala Asp Ile Thr Phe Ala Thr Leu Asn Thr Lys Gly Asn Glu Gly			
1700		1705	1710
Asp Ile Val Arg Asp Ser Ile Gly Phe Ile Ser Ser Gln Val Pro Glu			
1715		1720	1725
Asp Pro Ser Thr Leu Val Thr Val Asp Glu Ile Gln Asp Asp Ser Ser			
1730		1735	1740
Asp Leu His Leu Val Thr Leu Asp Glu Val Thr Glu Glu Asp Glu Asp			
1745		1750	1755
Ser Leu Ala Asp Phe Asn Asn Leu Lys Glu Glu Leu Asn Phe Val Thr			
1765		1770	1775
Val Asp Glu Val Gly Glu Glu Asp Gly Asp Asn Asp Leu Lys Val			
1780		1785	1790
Glu Leu Ala Gln Ser Lys Asn Asp His Pro Thr Asp Lys Lys Gly Asn			
1795		1800	1805
Arg Lys Lys Arg Ala Val Asp Thr Lys Lys Thr Lys Leu Glu Ser Leu			
1810		1815	1820
Ser Gln Val Gly Pro Val Asn Glu Asn Val Met Glu Glu Asp Leu Lys			
1825		1830	1835
Thr Met Ile Glu Arg His Leu Thr Ala Lys Thr Pro Thr Lys Arg Val			
1845		1850	1855
Arg Ile Gly Lys Thr Leu Pro Ser Glu Lys Ala Val Val Thr Glu Pro			
1860		1865	1870
Ala Lys Gly Glu Glu Ala Phe Gln Met Ser Glu Val Asp Glu Glu Ser			
1875		1880	1885
Gly Leu Lys Asp Ser Glu Pro Glu Arg Lys Arg Lys Lys Thr Glu Asp			
1890		1895	1900
Ser Ser Ser Gly Lys Ser Val Ala Ser Asp Val Pro Glu Glu Leu Asp			
1905		1910	1915
Phe Leu Val Pro Lys Ala Gly Phe Phe Cys Pro Ile Cys Ser Leu Phe			
1925		1930	1935
Tyr Ser Gly Glu Lys Ala Met Thr Asn His Cys Lys Ser Thr Arg His			
1940		1945	1950
Lys Gln Asn Thr Glu Lys Phe Met Ala Lys Gln Arg Lys Glu Lys Glu			
1955		1960	1965
Gln Asn Glu Ala Glu Glu Arg Ser Ser Arg			
1970		1975	

<210> 74
<211> 366
<212> PRT
<213> Homo Sapiens

<400> 74

Met Arg Val Met Ala Pro Arg Thr Leu Ile Leu Leu Leu Ser Gly Ala			
1	5	10	15
Leu Ala Leu Thr Glu Thr Trp Ala Gly Ser His Ser Met Arg Tyr Phe			
20	25	30	
Tyr Thr Ala Val Ser Arg Pro Gly Arg Gly Glu Pro His Phe Ile Ala			
35	40	45	
Val Gly Tyr Val Asp Asp Thr Gln Phe Val Arg Phe Asp Ser Asp Ala			
50	55	60	
Ala Ser Pro Arg Gly Glu Pro Arg Ala Pro Trp Val Glu Gln Glu Gly			

65	70	75	80
Pro Glu Tyr Trp Asp Arg Glu Thr Gln Lys	Tyr Lys Arg Gln Ala Gln		
85	90	95	
Thr Asp Arg Val Ser Leu Arg Asn Leu Arg Gly	Tyr Tyr Asn Gln Ser		
100	105	110	
Glu Ala Gly Ser His Ile Ile Gln Arg Met Tyr	Gly Cys Asp Val Gly		
115	120	125	
Pro Asp Gly Arg Leu Leu Arg Gly Tyr Asp Gln	Tyr Ala Tyr Asp Gly		
130	135	140	
Lys Asp Tyr Ile Ala Leu Asn Glu Asp Leu Arg	Ser Trp Thr Ala Ala		
145	150	155	160
Asp Thr Ala Ala Gln Ile Thr Gln Arg Lys	Trp Glu Ala Ala Arg Glu		
165	170	175	
Ala Glu Gln Leu Arg Ala Tyr Leu Glu Gly	Leu Cys Val Glu Trp Leu		
180	185	190	
Arg Arg Tyr Leu Lys Asn Gly Lys Glu Thr	Leu Gln Arg Ala Glu His		
195	200	205	
Pro Lys Thr His Val Thr His His Pro Val Ser	Asp His Glu Ala Thr		
210	215	220	
Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro	Ala Glu Ile Thr Leu Thr		
225	230	235	240
Trp Gln Trp Asp Gly Glu Asp Gln Thr Gln	Asp Thr Glu Leu Val Glu		
245	250	255	
Thr Arg Pro Ala Gly Asp Gly Thr Phe Gln	Lys Trp Ala Ala Val Val		
260	265	270	
Val Pro Ser Gly Glu Glu Gln Arg Tyr Thr	Cys His Val Gln His Glu		
275	280	285	
Gly Leu Pro Glu Pro Leu Thr Leu Arg Trp	Glu Pro Ser Ser Gln Pro		
290	295	300	
Thr Ile Pro Ile Val Gly Ile Val Ala Gly	Leu Ala Val Leu Ala Val		
305	310	315	320
Leu Ala Val Leu Gly Ala Val Val Ala Val	Met Cys Arg Arg Lys		
325	330	335	
Ser Ser Gly Gly Lys Gly Ser Cys Ser Gln	Ala Ala Ser Ser Asn		
340	345	350	
Ser Ala Gln Gly Ser Asp Glu Ser Leu Ile	Ala Cys Lys Ala		
355	360	365	

<210> 75

<211> 240

<212> PRT

<213> Homo Sapiens

<400> 75

Met Gly Leu Glu Leu Tyr Leu Asp Leu Leu Ser	Gln Pro Cys Arg Ala		
1	5	10	15
Val Tyr Ile Phe Ala Lys Lys Asn Asp Ile Pro	Phe Glu Leu Arg Ile		
20	25	30	
Val Asp Leu Ile Lys Gly Gln His Leu Ser Asp	Ala Phe Ala Gln Val		
35	40	45	
Asn Pro Leu Lys Lys Val Pro Ala Leu Lys Asp	Gly Asp Phe Thr Leu		
50	55	60	
Thr Glu Ser Val Ala Ile Leu Leu Tyr Leu	Thr Arg Lys Tyr Lys Val		
65	70	75	80
Pro Asp Tyr Trp Tyr Pro Gln Asp Leu Gln	Ala Arg Ala Arg Val Asp		

85	90	95
Glu Tyr Leu Ala Trp Gln His Thr Thr	Leu Arg Arg Ser Cys	Leu Arg
100	105	110
Ala Leu Trp His Lys Val Met Phe Pro Val Phe	Leu Gly Gly	Pro Val
115	120	125
Ser Pro Gln Thr Leu Ala Ala Thr Leu Ala	Glu Leu Asp Val	Thr Leu
130	135	140
Gln Leu Leu Glu Asp Lys Phe Leu Gln Asn Lys	Ala Phe Leu Thr	Gly
145	150	155
Pro His Ile Ser Leu Ala Asp Leu Val Ala Ile	Thr Glu Leu Met	His
165	170	175
Pro Val Gly Ala Gly Cys Gln Val Phe Glu Gly	Arg Pro Lys	Leu Ala
180	185	190
Thr Trp Arg Gln Arg Val Glu Ala Ala Val Gly	Glu Asp Leu Phe	Gln
195	200	205
Glu Ala His Glu Val Ile Leu Lys Ala Lys Asp	Phe Pro Pro	Ala Asp
210	215	220
Pro Thr Ile Lys Gln Lys Leu Met Pro Trp Val	Leu Ala Met	Ile Arg
225	230	235
		240

<210> 76
 <211> 953
 <212> PRT
 <213> Homo Sapiens

<400> 76		
Met Ile Thr Ser Ala Ala Gly Ile Ile Ser	Leu Leu Asp Glu Asp Glu	
1	5	10
Pro Gln Leu Lys Glu Phe Ala Leu His	Lys Leu Asn Ala Val Val Asn	
20	25	30
Asp Phe Trp Ala Glu Ile Ser Glu Ser Val Asp	Lys Ile Glu Val Leu	
35	40	45
Tyr Glu Asp Glu Gly Phe Arg Ser Arg	Gln Phe Ala Ala Leu Val Ala	
50	55	60
Ser Lys Val Phe Tyr His Leu Gly Ala Phe	Glu Glu Ser Leu Asn Tyr	
65	70	75
80		
Ala Leu Gly Ala Arg Asp Leu Phe Asn Val Asn	Asp Asn Ser Glu Tyr	
85	90	95
Val Glu Thr Ile Ile Ala Lys Cys Ile Asp His	Tyr Thr Lys Gln Cys	
100	105	110
Val Glu Asn Ala Asp Leu Pro Glu Gly Glu	Lys Lys Pro Ile Asp Gln	
115	120	125
Arg Leu Glu Gly Ile Val Asn Lys Met Phe	Gln Arg Cys Leu Asp Asp	
130	135	140
His Lys Tyr Lys Gln Ala Ile Gly Ile Ala	Leu Glu Thr Arg Arg Leu	
145	150	155
Asp Val Phe Glu Lys Thr Ile Leu Glu Ser Asn	Asp Val Pro Gly Met	
165	170	175
Leu Ala Tyr Ser Leu Lys Leu Cys Met Ser	Leu Met Gln Asn Lys Gln	
180	185	190
Phe Arg Asn Lys Val Leu Arg Val Leu Val	Lys Ile Tyr Met Asn Leu	
195	200	205
Glu Lys Pro Asp Phe Ile Asn Val Cys Gln Cys	Leu Ile Phe Leu Asp	
210	215	220
Asp Pro Gln Ala Val Ser Asp Ile Leu Glu	Lys Leu Val Lys Glu Asp	

225	230	235	240
Asn Leu Leu Met Ala Tyr Gln Ile Cys Phe Asp Leu Tyr Glu Ser Ala			
245	250	255	
Ser Gln Gln Phe Leu Ser Ser Val Ile Gln Asn Leu Arg Thr Val Gly			
260	265	270	
Thr Pro Ile Ala Ser Val Pro Gly Ser Thr Asn Thr Gly Thr Val Pro			
275	280	285	
Gly Ser Glu Lys Asp Ser Asp Ser Met Glu Thr Glu Glu Lys Thr Ser			
290	295	300	
Ser Ala Phe Val Gly Lys Thr Pro Glu Ala Ser Pro Glu Pro Lys Asp			
305	310	315	320
Gln Thr Leu Lys Met Ile Lys Ile Leu Ser Gly Glu Met Ala Ile Glu			
325	330	335	
Leu His Leu Gln Phe Leu Ile Arg Asn Asn Asn Thr Asp Leu Met Ile			
340	345	350	
Leu Lys Asn Thr Lys Asp Ala Val Arg Asn Ser Val Cys His Thr Ala			
355	360	365	
Thr Val Ile Ala Asn Ser Phe Met His Cys Gly Thr Thr Ser Asp Gln			
370	375	380	
Phe Leu Arg Asp Asn Leu Glu Trp Leu Ala Arg Ala Thr Asn Trp Ala			
385	390	395	400
Lys Phe Thr Ala Thr Ala Ser Leu Gly Val Ile His Lys Gly His Glu			
405	410	415	
Lys Glu Ala Leu Gln Leu Met Ala Thr Tyr Leu Pro Lys Asp Thr Ser			
420	425	430	
Pro Gly Ser Ala Tyr Gln Glu Gly Gly Leu Tyr Ala Leu Gly Leu			
435	440	445	
Ile His Ala Asn His Gly Gly Asp Ile Ile Asp Tyr Leu Leu Asn Gln			
450	455	460	
Leu Lys Asn Ala Ser Asn Asp Ile Val Arg His Gly Gly Ser Leu Gly			
465	470	475	480
Leu Gly Leu Ala Ala Met Gly Thr Ala Arg Gln Asp Val Tyr Asp Leu			
485	490	495	
Leu Lys Thr Asn Leu Tyr Gln Asp Asp Ala Val Thr Gly Glu Ala Ala			
500	505	510	
Gly Leu Ala Leu Gly Leu Val Met Leu Gly Ser Lys Asn Ala Gln Ala			
515	520	525	
Ile Glu Asp Met Val Gly Tyr Ala Gln Glu Thr Gln His Glu Lys Ile			
530	535	540	
Leu Arg Gly Leu Ala Val Gly Ile Ala Leu Val Met Tyr Gly Arg Met			
545	550	555	560
Glu Glu Ala Asp Ala Leu Ile Glu Ser Leu Cys Arg Asp Lys Asp Pro			
565	570	575	
Ile Leu Arg Arg Ser Gly Met Tyr Thr Val Ala Met Ala Tyr Cys Gly			
580	585	590	
Ser Gly Asn Asn Lys Ala Ile Arg Arg Leu Leu His Val Ala Val Ser			
595	600	605	
Asp Val Asn Asp Asp Val Arg Ser Ala Ala Val Glu Ser Leu Gly Phe			
610	615	620	
Ile Leu Phe Arg Thr Pro Glu Gln Cys Pro Ser Val Val Ser Leu Leu			
625	630	635	640
Ser Glu Ser Tyr Asn Pro His Val Arg Tyr Gly Ala Ala Met Ala Leu			
645	650	655	
Gly Ile Cys Cys Ala Gly Thr Gly Asn Lys Glu Ala Ile Asn Leu Leu			
660	665	670	

Glu Pro Met Thr Asn Asp Pro Val Asn Tyr Val Arg Gln Gly Ala Leu
 675 680 685
 Ile Ala Ser Ala Leu Ile Met Ile Gln Gln Thr Glu Ile Thr Cys Pro
 690 695 700
 Lys Val Asn Gln Phe Arg Gln Leu Tyr Ser Lys Val Ile Asn Asp Lys
 705 710 715 720
 His Asp Asp Val Met Ala Lys Phe Gly Ala Ile Leu Ala Gln Gly Ile
 725 730 735
 Leu Asp Ala Gly Gly His Asn Val Thr Ile Ser Leu Gln Ser Arg Thr
 740 745 750
 Gly His Thr His Met Pro Ser Val Val Gly Val Leu Val Phe Thr Gln
 755 760 765
 Phe Trp Phe Trp Phe Pro Leu Ser His Phe Leu Ser Leu Ala Tyr Thr
 770 775 780
 Pro Thr Cys Val Ile Gly Leu Asn Lys Asp Leu Lys Met Pro Lys Val
 785 790 795 800
 Gln Tyr Lys Ser Asn Cys Lys Pro Ser Thr Phe Ala Tyr Pro Ala Pro
 805 810 815
 Leu Glu Val Pro Lys Glu Lys Glu Lys Val Ser Thr Ala Val
 820 825 830
 Leu Ser Ile Thr Ala Lys Ala Lys Lys Glu Lys Glu Lys Glu Lys
 835 840 845
 Lys Glu Glu Glu Lys Met Glu Val Asp Glu Ala Glu Lys Lys Glu Glu
 850 855 860
 Lys Glu Lys Lys Glu Pro Glu Pro Asn Phe Gln Leu Leu Asp Asn
 865 870 875 880
 Pro Ala Arg Val Met Pro Ala Gln Leu Lys Val Leu Thr Met Pro Glu
 885 890 895
 Thr Cys Arg Tyr Gln Pro Phe Lys Pro Leu Ser Ile Gly Gly Ile Ile
 900 905 910
 Ile Leu Lys Asp Thr Ser Glu Asp Ile Glu Glu Leu Val Glu Pro Val
 915 920 925
 Ala Ala His Gly Pro Lys Ile Glu Glu Glu Gln Glu Pro Glu Pro
 930 935 940
 Pro Glu Pro Phe Glu Tyr Ile Asp Asp
 945 950

<210> 77
 <211> 335
 <212> PRT
 <213> Homo Sapiens

<400> 77
 Met Gly Lys Val Lys Val Gly Val Asn Gly Phe Gly Arg Ile Gly Arg
 1 5 10 15
 Leu Val Thr Arg Ala Ala Phe Asn Ser Gly Lys Val Asp Ile Val Ala
 20 25 30
 Ile Asn Asp Pro Phe Ile Asp Leu Asn Tyr Met Val Tyr Met Phe Gln
 35 40 45
 Tyr Asp Ser Thr His Gly Lys Phe His Gly Thr Val Lys Ala Glu Asn
 50 55 60
 Gly Lys Leu Val Ile Asn Gly Asn Pro Ile Thr Ile Phe Gln Glu Arg
 65 70 75 80
 Asp Pro Ser Lys Ile Lys Trp Gly Asp Ala Gly Ala Glu Tyr Val Val
 85 90 95

Glu Ser Thr Gly Val Phe Thr Thr Met Glu Lys Ala Gly Ala His Leu
 100 105 110
 Gln Gly Gly Ala Lys Arg Val Ile Ile Ser Ala Pro Ser Ala Asp Ala
 115 120 125
 Pro Met Phe Val Met Gly Val Asn His Glu Lys Tyr Asp Asn Ser Leu
 130 135 140
 Lys Ile Ile Ser Asn Ala Ser Cys Thr Thr Asn Cys Leu Ala Pro Leu
 145 150 155 160
 Ala Lys Val Ile His Asp Asn Phe Gly Ile Val Glu Gly Leu Met Thr
 165 170 175
 Thr Val His Ala Ile Thr Ala Thr Gln Lys Thr Val Asp Gly Pro Ser
 180 185 190
 Gly Lys Leu Trp Arg Asp Gly Arg Gly Ala Leu Gln Asn Ile Ile Pro
 195 200 205
 Ala Ser Thr Gly Ala Ala Lys Ala Val Gly Lys Val Ile Pro Glu Leu
 210 215 220
 Asn Gly Lys Leu Thr Gly Met Ala Phe Arg Val Pro Thr Ala Asn Val
 225 230 235 240
 Ser Val Val Asp Leu Thr Cys Arg Leu Glu Lys Pro Ala Lys Tyr Asp
 245 250 255
 Asp Ile Lys Lys Val Val Lys Gln Ala Ser Glu Gly Pro Leu Lys Gly
 260 265 270
 Ile Leu Gly Tyr Thr Glu His Gln Val Val Ser Ser Asp Phe Asn Ser
 275 280 285
 Asp Thr His Ser Ser Thr Phe Asp Ala Gly Ala Gly Ile Ala Leu Asn
 290 295 300
 Asp His Phe Val Lys Leu Ile Ser Trp Tyr Asp Asn Glu Phe Gly Tyr
 305 310 315 320
 Ser Asn Arg Val Val Asp Leu Met Ala His Met Ala Ser Lys Glu
 325 330 335

<210> 78
 <211> 117
 <212> PRT
 <213> Homo Sapiens

<400> 78

Met Val Gln Arg Leu Thr Tyr Arg Arg Arg Leu Ser Tyr Asn Thr Ala
 1 5 10 15
 Ser Asn Lys Thr Arg Leu Ser Arg Thr Pro Gly Asn Arg Ile Val Tyr
 20 25 30
 Leu Tyr Thr Lys Lys Val Gly Lys Ala Pro Lys Ser Ala Cys Gly Val
 35 40 45
 Cys Pro Gly Lys Leu Arg Gly Val Arg Pro Val Arg Pro Lys Val Leu
 50 55 60
 Met Arg Leu Ser Lys Thr Lys Lys His Val Ser Arg Ala Tyr Gly Gly
 65 70 75 80
 Ser Met Cys Ala Lys Cys Val Arg Asp Arg Ile Lys Arg Ala Phe Leu
 85 90 95
 Ile Glu Glu Gln Lys Ile Ile Val Lys Val Leu Lys Ala Gln Ala Gln
 100 105 110
 Ser Gln Lys Ala Lys
 115

<210> 79

<211> 614
<212> PRT
<213> Homo Sapiens

<400> 79

Arg Ser Gly Gln Pro Arg Ala Glu Gly Leu Gly Ala Gly Ala Ala Gly
1 5 10 15

Pro Leu Arg Ala Met Ala Ala Pro Val Lys Gly Asn Arg Lys Gln Ser
20 25 30

Thr Glu Gly Asp Ala Leu Asp Pro Pro Ala Ser Pro Lys Pro Ala Gly
35 40 45

Lys Gln Asn Gly Ile Gln Asn Pro Ile Ser Leu Glu Asp Ser Pro Glu
50 55 60

Ala Gly Gly Glu Arg Glu Glu Gln Glu Arg Glu Glu Glu Gln Ala
65 70 75 80

Phe Leu Val Ser Leu Tyr Lys Phe Met Lys Glu Arg His Thr Pro Ile
85 90 95

Glu Arg Val Pro His Leu Gly Phe Lys Gln Ile Asn Leu Trp Lys Ile
100 105 110

Tyr Lys Ala Val Glu Lys Leu Gly Ala Tyr Glu Leu Val Thr Gly Arg
115 120 125

Arg Leu Trp Lys Asn Val Tyr Asp Glu Leu Gly Gly Ser Pro Gly Ser
130 135 140

Thr Ser Ala Ala Thr Cys Thr Arg Arg His Tyr Glu Arg Leu Val Leu
145 150 155 160

Pro Tyr Val Arg His Leu Lys Gly Glu Asp Asp Lys Pro Leu Pro Thr
165 170 175

Ser Lys Pro Arg Lys Gln Tyr Lys Met Ala Lys Glu Asn Arg Gly Asp
180 185 190

Asp Gly Ala Thr Glu Arg Pro Lys Lys Ala Lys Glu Glu Arg Arg Met
195 200 205

Asp Gln Met Met Pro Gly Lys Thr Lys Ala Asp Ala Ala Asp Pro Ala
210 215 220

Pro Leu Pro Ser Gln Glu Pro Pro Arg Asn Ser Thr Glu Gln Gln Gly
225 230 235 240

Leu Ala Ser Gly Ser Ser Val Ser Phe Val Gly Ala Ser Gly Cys Pro
245 250 255

Glu Ala Tyr Lys Arg Leu Leu Ser Ser Phe Tyr Cys Lys Gly Thr His
260 265 270

Gly Ile Met Ser Pro Leu Ala Lys Lys Lys Leu Leu Ala Gln Val Ser
275 280 285

Lys Val Glu Ala Leu Gln Cys Gln Glu Glu Gly Cys Arg His Gly Ala
290 295 300

Glu Pro Gln Ala Ser Pro Ala Val His Leu Pro Glu Ser Pro Gln Ser
305 310 315 320

Pro Lys Gly Leu Thr Glu Asn Ser Arg His Arg Leu Thr Pro Gln Glu
325 330 335

Gly Leu Gln Ala Pro Gly Gly Ser Leu Arg Glu Glu Ala Gln Ala Gly
340 345 350

Pro Cys Pro Ala Ala Pro Ile Phe Lys Gly Cys Phe Tyr Thr His Pro
355 360 365

Thr Glu Val Leu Lys Pro Val Ser Gln His Pro Arg Asp Phe Phe Ser
370 375 380

Arg Leu Lys Asp Gly Val Leu Leu Gly Pro Pro Gly Lys Glu Gly Leu
385 390 395 400

Ser Val Lys Glu Pro Gln Leu Val Trp Gly Gly Asp Ala Asn Arg Pro
 405 410 415
 Ser Ala Phe His Lys Gly Gly Ser Arg Lys Gly Ile Leu Tyr Pro Lys
 420 425 430
 Pro Lys Ala Cys Trp Val Ser Pro Met Ala Lys Val Pro Ala Glu Ser
 435 440 445
 Pro Thr Leu Pro Pro Thr Phe Pro Ser Ser Pro Gly Leu Gly Ser Lys
 450 455 460
 Arg Ser Leu Glu Glu Glu Gly Ala Ala His Ser Gly Lys Arg Leu Arg
 465 470 475 480
 Ala Val Ser Pro Phe Leu Lys Glu Ala Asp Ala Lys Lys Cys Gly Ala
 485 490 495
 Lys Pro Ala Gly Ser Gly Leu Val Ser Cys Leu Leu Gly Pro Ala Leu
 500 505 510
 Gly Pro Val Pro Pro Glu Ala Tyr Arg Gly Thr Met Leu His Cys Pro
 515 520 525
 Leu Asn Phe Thr Gly Thr Pro Gly Pro Leu Lys Gly Gln Ala Ala Leu
 530 535 540
 Pro Phe Ser Pro Leu Val Ile Pro Ala Phe Pro Ala His Phe Leu Ala
 545 550 555 560
 Thr Ala Gly Pro Ser Pro Met Ala Ala Gly Leu Met His Phe Pro Pro
 565 570 575
 Thr Ser Phe Asp Ser Ala Leu Arg His Arg Leu Cys Pro Ala Ser Ser
 580 585 590
 Ala Trp His Ala Pro Pro Val Thr Thr Tyr Ala Ala Pro His Phe Phe
 595 600 605
 His Leu Asn Thr Lys Leu
 610

<210> 80
 <211> 114
 <212> PRT
 <213> Homo Sapiens

<400> 80

Met Ala Ser Val Ser Glu Leu Ala Cys Ile Tyr Ser Ala Leu Ile Leu
 1 5 10 15
 His Asp Asp Glu Val Thr Val Thr Glu Asp Lys Ile Asn Ala Leu Ile
 20 25 30
 Lys Ala Ala Gly Val Asn Val Glu Pro Phe Trp Pro Gly Leu Phe Ala
 35 40 45
 Lys Ala Leu Ala Asn Val Asn Ile Gly Ser Leu Ile Cys Asn Val Gly
 50 55 60
 Ala Gly Gly Pro Ala Pro Ala Ala Gly Ala Ala Pro Ala Gly Gly Pro
 65 70 75 80
 Ala Pro Ser Thr Ala Ala Ala Pro Ala Glu Glu Lys Lys Val Glu Ala
 85 90 95
 Lys Lys Glu Glu Ser Glu Glu Ser Asp Asp Asp Met Gly Phe Gly Leu
 100 105 110
 Phe Asp

<210> 81
 <211> 596
 <212> PRT

<213> Homo Sapiens

<400> 81
 Met Arg Arg Ala His Glu Gly Arg Glu Ile Pro Ser Leu Gly Gly Ala
 1 5 10 15
 Arg Arg Arg Glu Val Leu Gln Ala Gly Arg Ser Gln Arg Ala Ala Gly
 20 25 30
 Arg Arg Arg Arg Gln Glu Leu Glu Leu Gly Val Gly Ser Gly Arg
 35 40 45
 Pro Gly Gly Pro Pro Pro Gly Pro Gly Arg Arg Gly Thr Cys Ala Ala
 50 55 60
 Ala Leu Pro Pro Glu Trp Pro Arg Arg Arg Thr Gly Leu Pro Arg Arg
 65 70 75 80
 Gly Pro Arg Pro Pro Leu Ala Met Ala Lys Trp Leu Asn Lys Tyr Phe
 85 90 95
 Ser Leu Gly Asn Ser Lys Thr Lys Ser Pro Pro Gln Pro Pro Arg Pro
 100 105 110
 Asp Tyr Arg Glu Gln Arg Arg Arg Gly Glu Arg Pro Ser Gln Pro Pro
 115 120 125
 Gln Ala Val Pro Gln Ala Ser Ser Ala Ala Ser Ala Ser Cys Gly Pro
 130 135 140
 Ala Thr Ala Ser Cys Phe Ser Ala Ser Ser Gly Ser Leu Pro Asp Asp
 145 150 155 160
 Ser Gly Ser Thr Ser Asp Leu Ile Arg Ala Tyr Arg Ala Gln Lys Glu
 165 170 175
 Arg His Phe Gln Asp Pro Tyr Asn Gly Pro Gly Ser Ser Leu Arg Lys
 180 185 190
 Leu Arg Ala Met Cys Arg Leu Asp Tyr Cys Gly Ser Gly Glu Pro
 195 200 205
 Gly Gly Val Gln Arg Ala Phe Ser Ala Ser Ser Ala Ser Gly Ala Ala
 210 215 220
 Gly Cys Cys Cys Ala Ser Ser Gly Ala Gly Ala Ala Ala Ser Ser Ser
 225 230 235 240
 Ser Ser Ser Gly Ser Pro His Leu Tyr Arg Ser Ser Ser Glu Arg Arg
 245 250 255
 Pro Ala Thr Pro Ala Glu Val Arg Tyr Ile Ser Pro Lys His Arg Leu
 260 265 270
 Ile Lys Val Glu Ser Ala Ala Gly Gly Ala Gly Asp Pro Leu Gly
 275 280 285
 Gly Ala Cys Ala Gly Gly Arg Thr Trp Ser Pro Thr Ala Cys Gly Gly
 290 295 300
 Lys Lys Leu Leu Asn Lys Cys Ala Ala Ser Ala Ala Glu Glu Ser Gly
 305 310 315 320
 Ala Gly Lys Lys Asp Lys Val Thr Ile Ala Asp Asp Tyr Ser Asp Pro
 325 330 335
 Phe Asp Ala Lys Asn Asp Leu Lys Ser Lys Ala Gly Lys Gly Glu Ser
 340 345 350
 Ala Gly Tyr Met Glu Pro Tyr Glu Ala Gln Arg Ile Met Thr Glu Phe
 355 360 365
 Gln Arg Gln Glu Ser Val Arg Ser Gln His Lys Gly Ile Gln Leu Tyr
 370 375 380
 Asp Thr Pro Tyr Glu Pro Glu Gly Gln Ser Val Asp Ser Asp Ser Glu
 385 390 395 400
 Ser Thr Val Ser Pro Arg Leu Arg Glu Ser Lys Leu Pro Gln Asp Asp
 405 410 415

Asp Arg Pro Ala Asp Glu Tyr Asp Gln Pro Trp Glu Trp Asn Arg Val
 420 425 430
 Thr Ser Pro Ala Leu Ala Ala Gln Phe Asn Gly Asn Glu Lys Arg Gln
 435 440 445
 Ser Ser Pro Ser Pro Ser Arg Asp Arg Arg Arg Gln Leu Arg Ala Pro
 450 455 460
 Gly Gly Gly Phe Lys Pro Ile Lys His Gly Ser Pro Glu Phe Cys Gly
 465 470 475 480
 Ile Leu Gly Glu Arg Val Asp Pro Ala Val Pro Leu Glu Lys Gln Ile
 485 490 495
 Trp Tyr His Gly Ala Ile Ser Arg Gly Asp Ala Glu Asn Leu Leu Arg
 500 505 510
 Leu Cys Lys Glu Cys Ser Tyr Leu Val Arg Asn Ser Gln Thr Ser Lys
 515 520 525
 His Asp Tyr Pro Leu Ser Leu Arg Ser Asn Gln Gly Phe Met His Met
 530 535 540
 Lys Leu Ala Lys Thr Lys Glu Lys Tyr Val Leu Gly Gln Asn Ser Pro
 545 550 555 560
 Pro Phe Asp Ser Val Pro Glu Val Ile His Tyr Tyr Thr Thr Arg Lys
 565 570 575
 Leu Pro Ile Lys Gly Ala Glu His Leu Ser Leu Leu Tyr Pro Val Ala
 580 585 590
 Val Arg Thr Leu
 595

<210> 82
 <211> 207
 <212> PRT
 <213> Homo Sapiens

<400> 82

Met Ser Pro Leu Leu Arg Arg Leu Leu Leu Ala Ala Leu Leu Gln Leu
 1 5 10 15
 Ala Pro Ala Gln Ala Pro Val Ser Gln Pro Asp Ala Pro Gly His Gln
 20 25 30
 Arg Lys Val Val Ser Trp Ile Asp Val Tyr Thr Arg Ala Thr Cys Gln
 35 40 45
 Pro Arg Glu Val Val Val Pro Leu Thr Val Glu Leu Met Gly Thr Val
 50 55 60
 Ala Lys Gln Leu Val Pro Ser Cys Val Thr Val Gln Arg Cys Gly Gly
 65 70 75 80
 Cys Cys Pro Asp Asp Gly Leu Glu Cys Val Pro Thr Gly Gln His Gln
 85 90 95
 Val Arg Met Gln Ile Leu Met Ile Arg Tyr Pro Ser Ser Gln Leu Gly
 100 105 110
 Glu Met Ser Leu Glu Glu His Ser Gln Cys Glu Cys Arg Pro Lys Lys
 115 120 125
 Lys Asp Ser Ala Val Lys Pro Asp Arg Ala Ala Thr Pro His His Arg
 130 135 140
 Pro Gln Pro Arg Ser Val Pro Gly Trp Asp Ser Ala Pro Gly Ala Pro
 145 150 155 160
 Ser Pro Ala Asp Ile Thr His Pro Thr Pro Ala Pro Gly Pro Ser Ala
 165 170 175
 His Ala Ala Pro Ser Thr Thr Ser Ala Leu Thr Pro Gly Pro Ala Ala
 180 185 190

Ala Ala Ala Asp Ala Ala Ser Ser Val Ala Lys Gly Gly Ala
 195 200 205

 <210> 83
 <211> 429
 <212> PRT
 <213> Homo Sapiens

 <400> 83
 Glu Cys Asp Val Met Thr Tyr Val Arg Glu Thr Cys Gly Cys Cys Asp
 1 5 10 15
 Cys Glu Lys Arg Cys Gly Ala Leu Asp Val Val Phe Val Ile Asp Ser
 20 25 30
 Ser Glu Ser Ile Gly Tyr Thr Asn Phe Thr Leu Glu Lys Asn Phe Val
 35 40 45
 Ile Asn Val Val Asn Arg Leu Gly Ala Ile Ala Lys Asp Pro Lys Ser
 50 55 60
 Glu Thr Gly Thr Arg Val Gly Val Val Gln Tyr Ser His Glu Gly Thr
 65 70 75 80
 Phe Glu Ala Ile Gln Leu Asp Asp Glu His Ile Asp Ser Leu Ser Ser
 85 90 95
 Phe Lys Glu Ala Val Lys Asn Leu Glu Trp Ile Ala Gly Gly Thr Trp
 100 105 110
 Thr Pro Ser Ala Leu Lys Phe Ala Tyr Asp Arg Leu Ile Lys Glu Ser
 115 120 125
 Arg Arg Gln Lys Thr Arg Val Phe Ala Val Val Ile Thr Asp Gly Arg
 130 135 140
 His Asp Pro Arg Asp Asp Asp Leu Asn Leu Arg Ala Leu Cys Asp Arg
 145 150 155 160
 Asp Val Thr Val Thr Ala Ile Gly Ile Gly Asp Met Phe His Glu Lys
 165 170 175
 His Glu Ser Glu Asn Leu Tyr Ser Ile Ala Cys Asp Lys Pro Gln Gln
 180 185 190
 Val Arg Asn Met Thr Leu Phe Ser Asp Leu Val Ala Glu Lys Phe Ile
 195 200 205
 Asp Asp Met Glu Asp Val Leu Cys Pro Asp Pro Gln Ile Val Cys Pro
 210 215 220
 Asp Leu Pro Cys Gln Thr Glu Leu Ser Val Ala Gln Cys Thr Gln Arg
 225 230 235 240
 Pro Val Asp Ile Val Phe Leu Leu Asp Gly Ser Glu Arg Leu Gly Glu
 245 250 255
 Gln Asn Phe His Lys Ala Arg Arg Phe Val Glu Gln Val Ala Arg Arg
 260 265 270
 Leu Thr Leu Ala Arg Arg Asp Asp Asp Pro Leu Asn Ala Arg Val Ala
 275 280 285
 Leu Leu Gln Phe Gly Gly Pro Gly Glu Gln Gln Val Ala Phe Pro Leu
 290 295 300
 Ser His Asn Leu Thr Ala Ile His Glu Ala Leu Glu Thr Thr Gln Tyr
 305 310 315 320
 Leu Asn Ser Phe Ser His Val Gly Ala Gly Val Val His Ala Ile Asn
 325 330 335
 Ala Ile Val Arg Ser Pro Arg Gly Gly Ala Arg Arg His Ala Glu Leu
 340 345 350
 Ser Phe Val Phe Leu Thr Asp Gly Val Thr Gly Asn Asp Ser Leu His
 355 360 365

Glu Ser Ala His Ser Met Arg Asn Glu Asn Val Val Pro Thr Val Leu
 370 375 380
 Ala Leu Gly Ser Asp Val Asp Met Asp Val Leu Thr Thr Leu Ser Leu
 385 390 395 400
 Gly Asp Arg Ala Ala Val Phe His Glu Lys Asp Tyr Asp Ser Leu Ala
 405 410 415
 Gln Pro Gly Phe Phe Asp Arg Phe Ile Arg Trp Ile Cys
 420 425

<210> 84
<211> 113
<212> PRT
<213> Homo Sapiens

<400> 84
Met Ser Ala Ser Val Val Ser Val Ile Ser Arg Phe Leu Glu Glu Tyr
 1 5 10 15
 Leu Ser Ser Thr Pro Gln Arg Leu Lys Leu Leu Asp Ala Tyr Leu Leu
 20 25 30
 Tyr Ile Leu Leu Thr Gly Ala Leu Gln Phe Gly Tyr Cys Leu Leu Val
 35 40 45
 Gly Thr Phe Pro Phe Asn Ser Phe Leu Ser Gly Phe Ile Ser Cys Val
 50 55 60
 Gly Ser Phe Ile Leu Ala Val Cys Leu Arg Ile Gln Ile Asn Pro Gln
 65 70 75 80
 Asn Lys Ala Asp Phe Gln Gly Ile Ser Pro Glu Arg Ala Phe Ala Asp
 85 90 95
 Phe Leu Phe Ala Ser Thr Ile Leu His Leu Val Val Met Asn Phe Val
 100 105 110
 Gly

<210> 85
<211> 258
<212> PRT
<213> Homo Sapiens

<400> 85
Met Ile Asn Ile Glu Ser Met Asp Thr Asp Lys Asp Asp Pro His Gly
 1 5 10 15
 Arg Leu Glu Tyr Thr Glu His Gln Gly Arg Ile Lys Asn Ala Arg Glu
 20 25 30
 Ala His Ser Gln Ile Glu Lys Arg Arg Arg Asp Lys Met Asn Ser Phe
 35 40 45
 Ile Asp Glu Leu Ala Ser Leu Val Pro Thr Cys Asn Ala Met Ser Arg
 50 55 60
 Lys Leu Asp Lys Leu Thr Val Leu Arg Met Ala Val Gln His Met Lys
 65 70 75 80
 Thr Leu Arg Gly Ala Thr Asn Pro Tyr Thr Glu Ala Asn Tyr Lys Pro
 85 90 95
 Thr Phe Leu Ser Asp Asp Glu Leu Lys His Leu Ile Leu Arg Ala Ala
 100 105 110
 Asp Gly Phe Leu Phe Val Val Gly Cys Asp Arg Gly Lys Ile Leu Phe
 115 120 125
 Val Ser Glu Ser Val Phe Lys Ile Leu Asn Tyr Ser Gln Asn Asp Leu

130	135	140
Ile	Gly	Gln
Gly	Gln	Ser
Leu	Leu	Phe
Phe	Asp	Tyr
Asp	Tyr	Leu
Tyr	Leu	His
Leu	His	Pro
His	Pro	Lys
Pro	Lys	Asp
Lys	Asp	Ile
Asp	Ile	Ala
Ile	Ala	Lys
Ala	Lys	
Val	Lys	Glu
Lys	Glu	Gln
Leu	Gln	Leu
Leu	Leu	Ser
Ser	Ser	Ser
Ser	Ser	Asp
Asp	Thr	Ala
Thr	Ala	Pro
Ala	Pro	Arg
Pro	Arg	Glu
Glu	Arg	Arg
Arg	Arg	Leu
Leu		
Ile	Asp	Ala
Asp	Ala	Lys
Ala	Lys	Thr
Lys	Thr	Gly
Gly	Leu	Pro
Leu	Pro	Val
Pro	Val	Lys
Lys	Thr	Asp
Asp	Asp	Ile
Ile	Thr	Thr
Thr	Thr	Pro
Pro	Pro	Gly
Gly	Gly	Ile
Ile	Ile	Phe
Phe	Phe	Thr
Thr	Thr	Arg
Arg	Arg	Thr
Thr	Thr	Ser
Ser	Ser	Arg
Arg	Arg	His
His	His	Ile
Ile		
Val	Leu	

<210> 86
 <211> 569
 <212> PRT
 <213> Homo Sapiens

<400> 86			
Met	Ser	Thr	Met
Thr	Met	Val	Tyr
Met	Val	Tyr	Ile
Val	Tyr	Ile	Lys
Tyr	Ile	Lys	Glu
Ile	Lys	Glu	Asp
Lys	Glu	Asp	Lys
Glu	Asp	Lys	Leu
Asp	Leu	Leu	Ser
Leu	Ser	Ser	Ile
Ser	Ile	Ile	Asn
Ile	Asn	Asn	Ser
Asn	Ser	Ser	Ile
Ser	Ile	Ile	Leu
Ile	Leu	Leu	Glu
Leu	Glu	Glu	Lys
Glu	Lys	Lys	Leu
Lys	Leu	Leu	Arg
Leu	Arg	Arg	Ala
Arg	Ala	Ala	Gln
Ala	Gln	Gln	Val
Gln	Val	Val	Arg
Val	Arg	Arg	Leu
Arg	Leu	Leu	Cys
Leu	Cys	Cys	Gln
Cys	Gln	Gln	Glu
Gln	Glu	Glu	Lys
Glu	Lys	Lys	His
Lys	His	His	Leu
His	Leu	Leu	
Leu			
Glu	Phe	Met	Asn
Phe	Met	Asn	Gln
Met	Asn	Gln	Leu
Asn	Gln	Leu	Lys
Gln	Leu	Lys	Tyr
Leu	Lys	Tyr	Asp
Lys	Tyr	Asp	Asp
Tyr	Asp	Asp	Ile
Asp	Ile	Ile	Ser
Ile	Ser	Ser	Pro
Ser	Pro	Pro	Ser
Pro	Ser	Ser	
Ser			
Glu	Asp	Lys	Asp
Asp	Lys	Asp	Thr
Lys	Asp	Thr	Asp
Asp	Thr	Asp	Ser
Thr	Asp	Ser	Thr
Asp	Ser	Thr	Lys
Ser	Thr	Lys	Glu
Thr	Lys	Glu	Pro
Lys	Glu	Pro	Leu
Glu	Pro	Leu	Asp
Pro	Leu	Asp	Asp
Leu	Asp	Asp	Leu
Asp	Leu	Leu	Phe
Leu	Phe	Phe	
Phe			
Pro	Asn	Asp	Glu
Asn	Asp	Glu	Asp
Asp	Glu	Asp	Asp
Glu	Asp	Asp	Pro
Asp	Pro	Pro	Gly
Pro	Gly	Gly	Ile
Gly	Ile	Ile	Gln
Ile	Gln	Gln	Gln
Gln	Gln	Gln	Gln
Gln	Gln	Gln	Gly
Gly	Gly	Gly	Tyr
Tyr	Gly	Gly	Tyr
Gly	Tyr	Tyr	Ile
Tyr	Ile	Ile	Pro
Ile	Pro	Pro	Ala
Pro	Ala	Ala	Arg
Ala	Arg	Arg	
Arg			
Leu	Arg	Thr	Leu
Arg	Thr	Leu	His
Thr	Leu	His	Asn
Leu	His	Asn	Leu
His	Asn	Leu	Val
Asn	Leu	Val	Ile
Leu	Val	Ile	Gln
Val	Ile	Gln	Tyr
Ile	Gln	Tyr	Ala
Gln	Tyr	Ala	Ser
Tyr	Ala	Ser	Gln
Ala	Ser	Gln	Gly
Ser	Gln	Gly	Arg
Gln	Gly	Arg	
Gly	Arg		
Arg			
Tyr	Glu	Val	Ala
Glu	Val	Ala	Val
Val	Ala	Val	Pro
Ala	Val	Pro	Leu
Val	Pro	Leu	Cys
Pro	Leu	Cys	Lys
Leu	Cys	Lys	Gln
Cys	Lys	Gln	Ala
Lys	Gln	Ala	Leu
Gln	Ala	Leu	Glu
Ala	Leu	Glu	Asp
Leu	Glu	Asp	Leu
Glu	Asp	Leu	Glu
Asp	Leu	Glu	Lys
Leu	Glu	Lys	Asn
Glu	Lys	Asn	Ile
Lys	Asn	Ile	
Asn	Ile		
Ile			

	245	250	255
Leu Ala Leu Val Tyr Arg Asp Gln Asn Lys Tyr Lys Asp Ala Ala Asn			
260	265	270	
Leu Leu Asn Asp Ala Leu Ala Ile Arg Glu Lys Thr Leu Gly Lys Asp			
275	280	285	
His Pro Ala Val Ala Ala Thr Leu Asn Asn Leu Ala Val Leu Tyr Gly			
290	295	300	
Lys Arg Gly Lys Tyr Lys Glu Ala Glu Pro Leu Cys Lys Arg Ala Leu			
305	310	315	320
Glu Ile Arg Glu Lys Val Leu Gly Lys Asp His Pro Asp Val Ala Lys			
325	330	335	
Gln Leu Asn Asn Leu Ala Leu Leu Cys Gln Asn Gln Gly Lys Tyr Glu			
340	345	350	
Glu Val Glu Tyr Tyr Tyr Gln Arg Ala Leu Glu Ile Tyr Gln Thr Lys			
355	360	365	
Leu Gly Pro Asp Asp Pro Asn Val Ala Lys Thr Lys Asn Asn Leu Ala			
370	375	380	
Ser Cys Tyr Leu Lys Gln Gly Lys Phe Lys Gln Ala Glu Thr Leu Tyr			
385	390	395	400
Lys Glu Ile Leu Thr Arg Ala His Glu Arg Glu Phe Gly Ser Val Asp			
405	410	415	
Asp Glu Asn Lys Pro Ile Trp Met His Ala Glu Glu Arg Glu Glu Cys			
420	425	430	
Lys Gly Lys Lys Asp Gly Thr Ser Phe Gly Glu Tyr Gly Gly Trp			
435	440	445	
Tyr Lys Ala Cys Lys Val Asp Ser Pro Thr Val Thr Thr Thr Leu Lys			
450	455	460	
Asn Leu Gly Ala Leu Tyr Arg Arg Gln Gly Lys Phe Glu Ala Ala Glu			
465	470	475	480
Thr Leu Glu Glu Ala Ala Met Arg Ser Arg Lys Gln Gly Leu Asp Asn			
485	490	495	
Val His Lys Gln Arg Val Ala Glu Val Leu Asn Asp Pro Glu Asn Met			
500	505	510	
Glu Lys Arg Arg Ser Arg Glu Ser Leu Asn Val Asp Val Val Lys Tyr			
515	520	525	
Glu Ser Gly Pro Asp Gly Gly Glu Glu Val Ser Met Ser Val Glu Trp			
530	535	540	
Asn Gly Gly Val Ser Gly Arg Ala Ser Phe Cys Gly Lys Arg Gln Gln			
545	550	555	560
Gln Gln Trp Pro Gly Arg Arg His Arg			
565			

<210> 87
 <211> 736
 <212> PRT
 <213> Homo Sapiens

<400> 87
 Met Glu Ala Leu Ile Pro Val Ile Asn Lys Leu Gln Asp Val Phe Asn
 1 5 10 15
 Thr Val Gly Ala Asp Ile Ile Gln Leu Pro Gln Ile Val Val Val Gly
 20 25 30
 Thr Gln Ser Ser Gly Lys Ser Ser Val Leu Glu Ser Leu Val Gly Arg
 35 40 45
 Asp Leu Leu Pro Arg Gly Thr Gly Ile Val Thr Arg Arg Pro Leu Ile

50.	55	60
Leu Gln Leu Val His Val Thr Gln Glu Asp Lys Arg Lys Thr Thr Gly		
65	70	75
Glu Glu Asn Gly Val Glu Ala Glu Glu Trp Gly Lys Phe Leu His Thr		80
85	90	95
Lys Asn Lys Leu Tyr Thr Asp Phe Asp Glu Ile Arg Gln Glu Ile Glu		
100	105	110
Asn Glu Thr Glu Arg Ile Ser Gly Asn Asn Lys Gly Val Ser Pro Glu		
115	120	125
Pro Ile His Leu Lys Ile Phe Ser Pro Asn Val Val Asn Leu Thr Leu		
130	135	140
Val Asp Leu Pro Gly Met Thr Lys Val Pro Val Gly Asp Gln Pro Lys		
145	150	155
Asp Ile Glu Leu Gln Ile Arg Glu Leu Ile Leu Arg Phe Ile Ser Asn		
165	170	175
Pro Asn Ser Ile Ile Leu Ala Val Thr Ala Ala Asn Thr Asp Met Ala		
180	185	190
Thr Ser Glu Ala Leu Lys Ile Ser Arg Glu Val Asp Pro Asp Gly Arg		
195	200	205
Arg Thr Leu Ala Val Ile Thr Lys Leu Asp Leu Met Asp Ala Gly Thr		
210	215	220
Asp Ala Met Asp Val Leu Met Gly Arg Val Ile Pro Val Lys Leu Gly		
225	230	235
Ile Ile Gly Val Val Asn Arg Ser Gln Leu Asp Ile Asn Asn Lys Lys		
245	250	255
Ser Val Thr Asp Ser Ile Arg Asp Glu Tyr Ala Phe Leu Gln Lys Lys		
260	265	270
Tyr Pro Ser Leu Ala Asn Arg Asn Gly Thr Lys Tyr Leu Ala Arg Thr		
275	280	285
Leu Asn Arg Leu Leu Met His His Ile Arg Asp Cys Leu Pro Glu Leu		
290	295	300
Lys Thr Arg Ile Asn Val Leu Ala Ala Gln Tyr Gln Ser Leu Leu Asn		
305	310	315
Ser Tyr Gly Glu Pro Val Asp Asp Lys Ser Ala Thr Leu Leu Gln Leu		
325	330	335
Ile Thr Lys Phe Ala Thr Glu Tyr Cys Asn Thr Ile Glu Gly Thr Ala		
340	345	350
Lys Tyr Ile Glu Thr Ser Glu Leu Cys Gly Gly Ala Arg Ile Cys Tyr		
355	360	365
Ile Phe His Glu Thr Phe Gly Arg Thr Leu Glu Ser Val Asp Pro Leu		
370	375	380
Gly Gly Leu Asn Thr Ile Asp Ile Leu Thr Ala Ile Arg Asn Ala Thr		
385	390	395
Gly Pro Arg Pro Ala Leu Phe Val Pro Glu Val Ser Phe Glu Leu Leu		
405	410	415
Val Lys Arg Gln Ile Lys Arg Leu Glu Pro Ser Leu Arg Cys Val		
420	425	430
Glu Leu Val His Glu Glu Met Gln Arg Ile Ile Gln His Cys Ser Asn		
435	440	445
Tyr Ser Thr Gln Glu Leu Leu Arg Phe Pro Lys Leu His Asp Ala Ile		
450	455	460
Val Glu Val Val Thr Cys Leu Leu Arg Lys Arg Leu Pro Val Thr Asn		
465	470	475
Glu Met Val His Asn Leu Val Ala Ile Glu Leu Ala Tyr Ile Asn Thr		
485	490	495

Lys His Pro Asp Phe Ala Asp Ala Cys Gly Leu Met Asn Asn Asn Ile
 500 505 510
 Glu Glu Gln Arg Arg Asn Arg Leu Ala Arg Glu Leu Pro Ser Ala Val
 515 520 525
 Ser Arg Asp Lys Ser Ser Lys Val Pro Ser Ala Leu Ala Pro Ala Ser
 530 535 540
 Gln Glu Pro Ser Pro Ala Ala Ser Ala Glu Ala Asp Gly Lys Leu Ile
 545 550 555 560
 Gln Asp Ser Arg Arg Glu Thr Lys Asn Val Ala Ser Gly Gly Gly
 565 570 575
 Val Gly Asp Gly Val Gln Glu Pro Thr Thr Gly Asn Trp Arg Gly Met
 580 585 590
 Leu Lys Thr Ser Lys Ala Glu Glu Leu Leu Ala Glu Glu Lys Ser Lys
 595 600 605
 Pro Ile Pro Ile Met Pro Ala Ser Pro Gln Lys Gly His Ala Val Asn
 610 615 620
 Leu Leu Asp Val Pro Val Pro Val Ala Arg Lys Leu Ser Ala Arg Glu
 625 630 635 640
 Gln Arg Asp Cys Glu Val Ile Glu Arg Leu Ile Lys Ser Tyr Phe Leu
 645 650 655
 Ile Val Arg Lys Asn Ile Gln Asp Ser Val Pro Lys Ala Val Met His
 660 665 670
 Phe Leu Val Asn His Val Lys Asp Thr Leu Gln Ser Glu Leu Val Gly
 675 680 685
 Gln Leu Tyr Lys Ser Ser Leu Leu Asp Asp Leu Leu Thr Glu Ser Glu
 690 695 700
 Asp Met Ala Gln Arg Arg Lys Glu Ala Ala Asp Met Leu Lys Ala Leu
 705 710 715 720
 Gln Gly Ala Ser Gln Ile Ile Ala Glu Ile Arg Glu Thr His Leu Trp
 725 730 735

<210> 88

<211> 37

<212> PRT

<213> Homo Sapiens

<400> 88

Met Gly Asp His Ala Trp Ser Phe Leu Lys Asp Phe Leu Ala Gly Gly
 1 5 10 15
 Val Ala Ala Ala Val Ser Lys Thr Ala Val Ala Pro Ile Glu Arg Val
 20 25 30
 Lys Leu Leu Leu Gln
 35

<210> 89

<211> 1381

<212> DNA

<213> Homo Sapiens

<400> 89

ccgcagccct agagccgccc aaggatggc gatggcgta cttggcttgg a gactggcg	60
gcgttcgtgt ccgagttctc tgcagtcnc tantttcccg gtagttcanc tgcncatgaa	120
tanaacagca atgagagccn ctcncaaaga ctggaaaat tcactgaatc nagtgaaact	180
ctngaaaaag gatccangaa acgaaatgaa nctnaaactc tnccgcgtat atnancangc	240
cnctgaanga cttgtntcat gcccnaacca ngtgtntttg acttgatcna caagggcca	300

atgggacaca	tggaatgccc	ttggcancct	gcccnnaagaa	ctgccaggca	naactatgtg	360
gatttggtgt	ccantttgan	tccntccttg	gaatcctcna	atcnngtgg	ncctggaaaca	420
nacaggaaat	ccactgggtt	tgaaaactctg	gtggtgcacct	ccgaagatgg	catcacaaag	480
atcatgttca	accggcccaa	aaagaaaaat	gccataaaca	ctgagatgta	tcatgaaatt	540
atgcgtgcac	ttaaagctgc	cagcaaggat	gactcaatca	tcactgtttt	aacaggaaat	600
ggtgactatt	acagtagtgg	gaatgatctg	actaacttca	ctgatattcc	ccctgggtgg	660
gtagaggaga	aagctaaaaa	taatgcccgtt	ttactgaggg	aatttgggg	ctgttttata	720
gattttccta	agcctctgat	tgcagtggtc	aatggtccag	ctgtgggcat	ctccgtcacc	780
ctccttgggc	tattcgatgc	cgtgtatgca	tctgacaggg	caacattca	tacaccattt	840
agtccacctag	gcccaaagtcc	ggaaggatgc	tcctcttaca	ctttccgaa	gataatgagc	900
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gctcaaggac	ttgttactga	agttttccct	gatagcactt	ttcagaaaga	agtctggacc	1020
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aggaaaagag	agagagaaaaa	actacacgct	gttaatgctg	aagaatgaa	tgtccttcag	1140
ggaagatggc	tatcagatga	atgcacaaat	gctgtggtga	acttcttac	cagaaaatca	1200
aaactgtgat	gaccactaca	gcagagtaaa	gcatgtccaa	ggaaggatgt	gctgttacct	1260
ctgatttcca	gtactggaac	taaataagct	tcattgtgcc	ttttgttagt	ctagaatatc	1320
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<210> 90
 <211> 298
 <212> PRT
 <213> Homo Sapiens

<400> 90															
Thr	Cys	Met	Pro	Pro	Val	Phe	Asp	Leu	Ile	Lys	Gly	Pro	Met	Gly	His
1					5				10				15		
Met	Glu	Cys	Pro	Trp	Pro	Ala	Arg	Thr	Ala	Arg	Asn	Tyr	Val	Asp	Leu
				20				25				30			
Val	Ser	Leu	Pro	Ser	Leu	Glu	Ser	Ser	Asn	Val	Pro	Gly	Thr	Arg	Lys
				35				40				45			
Ser	Thr	Gly	Phe	Glu	Thr	Leu	Val	Val	Thr	Ser	Glu	Asp	Gly	Ile	Thr
				50				55				60			
Lys	Ile	Met	Phe	Asn	Arg	Pro	Lys	Lys	Lys	Asn	Ala	Ile	Asn	Thr	Glu
65					70				75				80		
Met	Tyr	His	Glu	Ile	Met	Arg	Ala	Leu	Lys	Ala	Ala	Ser	Lys	Asp	Asp
				85				90				95			
Ser	Ile	Ile	Thr	Val	Leu	Thr	Gly	Asn	Gly	Asp	Tyr	Tyr	Ser	Ser	Gly
				100				105				110			
Asn	Asp	Leu	Thr	Asn	Phe	Thr	Asp	Ile	Pro	Pro	Gly	Gly	Val	Glu	Glu
				115				120				125			
Lys	Ala	Lys	Asn	Asn	Ala	Val	Leu	Leu	Arg	Glu	Phe	Val	Gly	Cys	Phe
				130				135				140			
Ile	Asp	Phe	Pro	Lys	Pro	Leu	Ile	Ala	Val	Val	Asn	Gly	Pro	Ala	Val
145					150					155			160		
Gly	Ile	Ser	Val	Thr	Leu	Leu	Gly	Leu	Phe	Asp	Ala	Val	Tyr	Ala	Ser
				165				170				175			
Asp	Arg	Ala	Thr	Phe	His	Thr	Pro	Phe	Ser	His	Leu	Gly	Gln	Ser	Pro
				180				185				190			
Glu	Gly	Cys	Ser	Ser	Tyr	Thr	Phe	Pro	Lys	Ile	Met	Ser	Pro	Ala	Lys
				195				200				205			
Ala	Thr	Glu	Met	Leu	Ile	Phe	Gly	Lys	Lys	Leu	Thr	Ala	Gly	Glu	Ala
				210				215				220			
Cys	Ala	Gln	Leu	Val	Thr	Glu	Val	Phe	Pro	Asp	Ser	Thr	Phe	Gln	Lys

225	230	235	240
Glu Val Trp Thr Lys Leu Lys Ala Phe Ala Lys Ala Ser Pro Lys Cys			
245	250	255	
Leu Glu Asn Phe Lys Arg Gly Asn Gln Gly Lys Glu Arg Glu Lys Asn			
260	265	270	
Tyr Thr Pro Leu Met Leu Lys Lys Cys Asn Val Pro Ser Arg Lys Gly			
275	280	285	
Tyr Gln Asp Glu Cys Thr Lys Cys Leu Trp			
290	295		

<210> 91
<211> 1514
<212> DNA
<213> Homo Sapiens

<400> 91

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gcccgtcggc cccgtgagga tctgagagcc atgtcggcca gcagccttggagcagaga	180
ccaaaaggta aaggaaacaa agtacaaaat ggatctgtac atcaaaagga tggattaaac	240
gatgatgatt ttgaacctta cttgagtcca caggcaaggc ccaataatgc atatactgcc	300
atgtcagatt cctacttacc cagttactac agtccctcca ttggcttcctc ctattcttg	360
ggtgaagctg ctgggtctac ggggggtgac acagccatgc cctacttaac ttcttatgga	420
cagctgagca acggagagcc ccactcccta ccagatgca tggttggca accaggagcc	480
ctaggttagca ctccatttct tggtagcat ggtttaatt tcttccca tgggattgac	540
ttctcagcat gggaaataa cagtttcag ggacagtcta ctcagagctc tggatatagt	600
agcaattatg cttatgcacc tagctcccta ggtggagcca tgattgatgg acagtcagct	660
tttgc当地 agacccctcaa taaggcttcc ggcattgaaata ctatagacca agggatggca	720
gcactgaagt tggtagcac agaaggtaa agcaatgttca caaaagttgt aggttctgct	780
gttggtagcg ggtccattac tagtaacatc gtggcttcca atagtttgcc tccagccacc	840
attgctccctc caaaaccaggc atcttggct gatattgctca gcaagctgc aaaacagcaa	900
cctaaactga agaccaagaa tggcattgca gggtaagtc ttccgcacc cccgataaaag	960
cataacatgg atattggAAC ttggataaac aagggtcccg ttgcaaaagc cccctcacag	1020
gctttgggttc agaatatagg tcagccaacc caggggtctc ctcagcctgt aggtcagcag	1080
gctaacaata gccaccagg ggctcaggca tcagtagggc aacagacaca gccattgcct	1140
ccacccctccac cacagcctgc ccagcttca gtccagcaac aggcaagctca gccaaccgc	1200
tggtagcac ctccggAAC tggcagtggg ttccgtcata atgggttggaa tggtaatgga	1260
gtaggacagt ctcaggctgg ttctgtatct actcccttca aacccccc agtggtaggag	1320
aagcttcggc ccattaataa ctataacccc aaagattttg actggaaat ctgaaacatg	1380
ggcgggtttt catcattaaa gaactactct gangacgata ttccaccgttc catttaagtt	1440
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ttccatgaac gggg	1514

<210> 92
<211> 407
<212> PRT
<213> Homo Sapiens

<400> 92

Met Ser Ala Ser Ser Leu Leu Glu Gln Arg Pro Lys Gly Gln Gly Asn			
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Lys Val Gln Asn Gly Ser Val His Gln Lys Asp Gly Leu Asn Asp Asp			
20	25	30	
Asp Phe Glu Pro Tyr Leu Ser Pro Gln Ala Arg Pro Asn Asn Ala Tyr			
35	40	45	

Thr Ala Met Ser Asp Ser Tyr Leu Pro Ser Tyr Tyr Ser Pro Ser Ile
 50 55 60
 Gly Phe Ser Tyr Ser Leu Gly Glu Ala Ala Trp Ser Thr Gly Gly Asp
 65 70 75 80
 Thr Ala Met Pro Tyr Leu Thr Ser Tyr Gly Gln Leu Ser Asn Gly Glu
 85 90 95
 Pro His Phe Leu Pro Asp Ala Met Phe Gly Gln Pro Gly Ala Leu Gly
 100 105 110
 Ser Thr Pro Phe Leu Gly Gln His Gly Phe Asn Phe Phe Pro Ser Gly
 115 120 125
 Ile Asp Phe Ser Ala Trp Gly Asn Asn Ser Ser Gln Gly Gln Ser Thr
 130 135 140
 Gln Ser Ser Gly Tyr Ser Ser Asn Tyr Ala Tyr Ala Pro Ser Ser Leu
 145 150 155 160
 Gly Gly Ala Met Ile Asp Gly Gln Ser Ala Phe Ala Asn Glu Thr Leu
 165 170 175
 Asn Lys Ala Pro Gly Met Asn Thr Ile Asp Gln Gly Met Ala Ala Leu
 180 185 190
 Lys Leu Gly Ser Thr Glu Val Ala Ser Asn Val Pro Lys Val Val Gly
 195 200 205
 Ser Ala Val Gly Ser Gly Ser Ile Thr Ser Asn Ile Val Ala Ser Asn
 210 215 220
 Ser Leu Pro Pro Ala Thr Ile Ala Pro Pro Lys Pro Ala Ser Trp Ala
 225 230 235 240
 Asp Ile Ala Ser Lys Pro Ala Lys Gln Gln Pro Lys Leu Lys Thr Lys
 245 250 255
 Asn Gly Ile Ala Gly Ser Ser Leu Pro Pro Pro Pro Ile Lys His Asn
 260 265 270
 Met Asp Ile Gly Thr Trp Asp Asn Lys Gly Pro Val Ala Lys Ala Pro
 275 280 285
 Ser Gln Ala Leu Val Gln Asn Ile Gly Gln Pro Thr Gln Gly Ser Pro
 290 295 300
 Gln Pro Val Gly Gln Gln Ala Asn Asn Ser Pro Pro Val Ala Gln Ala
 305 310 315 320
 Ser Val Gly Gln Gln Thr Gln Pro Leu Pro Pro Pro Pro Gln Pro
 325 330 335
 Ala Gln Leu Ser Val Gln Gln Ala Ala Gln Pro Thr Arg Trp Val
 340 345 350
 Ala Pro Arg Asn Arg Gly Ser Gly Phe Gly His Asn Gly Val Asp Gly
 355 360 365
 Asn Gly Val Gly Gln Ser Gln Ala Gly Ser Gly Ser Thr Pro Ser Glu
 370 375 380
 Pro His Pro Val Leu Glu Lys Leu Arg Ser Ile Asn Asn Tyr Asn Pro
 385 390 395 400
 Lys Asp Phe Asp Trp Glu Ile
 405

<210> 93
 <211> 2236
 <212> DNA
 <213> Homo Sapiens

<400> 93
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 120

ttccggcata	aggtgtgatt	tctgattgaa	aatgatgcag	agaaggacta	tcttatgtat	180
gtgctgcgaa	tgtaccacca	gaccatggac	gtggccgtgc	tcgtgggaga	cctgaagctg	240
gtcatcaatg	aacccagccg	tctgcctctg	tttgcattcca	ttcggccgct	gatcccactg	300
aagcaccagg	tgaaatatga	tcaagtgcacc	ccccggcgct	ccaggaagct	gaaggaggtg	360
cgtctggacc	gtctgcaccc	cgaaggcctc	ggcctgagtg	tgcgtgtgg	cctggagttt	420
ggctgtggc	tcttcatctc	ccacccatc	aaaggcggtc	aggcagacag	cgtcggctc	480
caggttagggg	acgagatcgt	ccggatcaat	ggatattcca	tctcctcctg	tacccatgag	540
gaggtcatca	acctcattcg	aaccaagaaa	actgtgtcca	tcaaagttag	acacatccgc	600
ctgatccccg	tgaaaagctc	tctgtatgag	cccctcactt	ggcagtatgt	ggatcagttt	660
gtgtcggaat	ctggggggcgt	gcgaggcagc	ctgggctccc	ctggaaatcg	ggaaaacaag	720
gagaagaagg	tcttcatca	cctggtaggc	tcccggggcc	ttggctgcag	catttccagc	780
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gaggtggat	tggagatagg	ggaccagatt	gtcgaagtca	atggcgtcg	cttctctaacc	900
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aagatcctcc	agagcagca	ggagatggag	cgccaaagga	gaaaagaaaat	tgcccagaag	1140
gcagcagagg	aaaatgagag	ataccggaa	gagatggAAC	agattgtaga	ggaggaagag	1200
aagtttaaga	agaatggga	agaagactgg	ggctcaaagg	aacagctact	cttgccctaaa	1260
accatca	ctgaggtaca	cccagttaccc	cttcgcacagc	caaagtatga	tcagggagtg	1320
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gatttccgga	aatatgagga	aggcttgac	ccctactcta	tgttcacccc	agagcagatc	1440
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gaaggcggtg	tggactcccc	cattggaaag	gtggctgttt	ctgctgtgt	tgagcgggg	1560
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ctccggcccc	acctcgtgaa	cacaaagct	cgaccggcc	ttgagagagg	ccacatgaca	1860
cacaccagat	ggcatccttgc	ggacctgaat	ctatcaccca	ggaatctcaa	actcccttgc	1920
gccctgaacc	aggggccagat	aaggaacagc	tcggggccact	tttttgaagg	ccaatgtgga	1980
ggaaaggggag	cagccagccg	tttggggagaa	gatctcaagg	atccagactc	tcattccctt	2040
cctctggccc	agtgaatttg	gtctctccca	gctttggggg	actccttct	tgaaccctaa	2100
taagacccca	ctggagtctc	tctctctcca	tccctctct	ctgcctctg	ctctaattgc	2160
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ttccagctt	aaaaaaaa					2236

<210> 94
<211> 652
<212> PRT
<213> Homo Sapiens

<400> 94

Met	Asp	Arg	Lys	Val	Ala	Arg	Glu	Phe	Arg	His	Lys	Val	Asp	Phe	Leu
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Ile	Glu	Asn	Asp	Ala	Glu	Lys	Asp	Tyr	Leu	Tyr	Asp	Val	Leu	Arg	Met
				20				25						30	
Tyr	His	Gln	Thr	Met	Asp	Val	Ala	Val	Leu	Val	Gly	Asp	Leu	Lys	Leu
				35				40					45		
Val	Ile	Asn	Glu	Pro	Ser	Arg	Leu	Pro	Leu	Phe	Asp	Ala	Ile	Arg	Pro
				50				55				60			
Leu	Ile	Pro	Leu	Lys	His	Gln	Val	Glu	Tyr	Asp	Gln	Leu	Thr	Pro	Arg
				65				70			75			80	
Arg	Ser	Arg	Lys	Leu	Lys	Glu	Val	Arg	Leu	Asp	Arg	Leu	His	Pro	Glu
				85				90					95		

Gly Leu Gly Leu Ser Val Arg Gly Gly Leu Glu Phe Gly Cys Gly Leu
 100 105 110
 Phe Ile Ser His Leu Ile Lys Gly Gly Gln Ala Asp Ser Val Gly Leu
 115 120 125
 Gln Val Gly Asp Glu Ile Val Arg Ile Asn Gly Tyr Ser Ile Ser Ser
 130 135 140
 Cys Thr His Glu Glu Val Ile Asn Leu Ile Arg Thr Lys Lys Thr Val
 145 150 155 160
 Ser Ile Lys Val Arg His Ile Gly Leu Ile Pro Val Lys Ser Ser Pro
 165 170 175
 Asp Glu Pro Leu Thr Trp Gln Tyr Val Asp Gln Phe Val Ser Glu Ser
 180 185 190
 Gly Gly Val Arg Gly Ser Leu Gly Ser Pro Gly Asn Arg Glu Asn Lys
 195 200 205
 Glu Lys Lys Val Phe Ile Ser Leu Val Gly Ser Arg Gly Leu Gly Cys
 210 215 220
 Ser Ile Ser Ser Gly Pro Ile Gln Lys Pro Gly Ile Phe Ile Ser His
 225 230 235 240
 Val Lys Pro Gly Ser Leu Ser Ala Glu Val Gly Leu Glu Ile Gly Asp
 245 250 255
 Gln Ile Val Glu Val Asn Gly Val Asp Phe Ser Asn Leu Asp His Lys
 260 265 270
 Glu Ala Val Asn Val Leu Lys Asn Ser Arg Ser Leu Thr Ile Ser Ile
 275 280 285
 Val Ala Ala Ala Gly Arg Glu Leu Phe Met Thr Asp Arg Glu Arg Leu
 290 295 300
 Ala Glu Ala Arg Gln Arg Glu Leu Gln Arg Gln Glu Leu Leu Met Gln
 305 310 315 320
 Lys Arg Leu Ala Met Glu Ser Asn Lys Ile Leu Gln Glu Gln Glu
 325 330 335
 Met Glu Arg Gln Arg Arg Lys Glu Ile Ala Gln Lys Ala Ala Glu Glu
 340 345 350
 Asn Glu Arg Tyr Arg Lys Glu Met Glu Gln Ile Val Glu Glu Glu
 355 360 365
 Lys Phe Lys Lys Gln Trp Glu Glu Asp Trp Gly Ser Lys Glu Gln Leu
 370 375 380
 Leu Leu Pro Lys Thr Ile Thr Ala Glu Val His Pro Val Pro Leu Arg
 385 390 395 400
 Lys Pro Lys Tyr Asp Gln Gly Val Glu Pro Glu Leu Glu Pro Ala Asp
 405 410 415
 Asp Leu Asp Gly Gly Thr Glu Glu Gln Gly Glu Gln Asp Phe Arg Lys
 420 425 430
 Tyr Glu Glu Gly Phe Asp Pro Tyr Ser Met Phe Thr Pro Glu Gln Ile
 435 440 445
 Met Gly Lys Asp Val Arg Leu Leu Arg Ile Lys Lys Glu Gly Ser Leu
 450 455 460
 Asp Leu Ala Leu Glu Gly Gly Val Asp Ser Pro Ile Gly Lys Val Val
 465 470 475 480
 Val Ser Ala Val Tyr Glu Arg Gly Ala Ala Glu Arg His Gly Ile
 485 490 495
 Val Lys Gly Asp Glu Ile Met Ala Ile Asn Gly Lys Ile Val Thr Asp
 500 505 510
 Tyr Thr Leu Ala Glu Ala Asp Ala Ala Leu Gln Lys Ala Trp Asn Gln
 515 520 525
 Gly Gly Asp Trp Ile Asp Leu Val Val Ala Val Cys Pro Pro Lys Glu

530	535	540
Tyr Asp Asp Glu Leu Thr Phe Leu Leu Lys Ser Lys Arg Gly Asn Gln		
545	550	555
Ile His Ala Leu Gly Asn Ser Glu Leu Arg Pro His Leu Val Asn Thr		
565	570	575
Lys Pro Arg Thr Ser Leu Glu Arg Gly His Met Thr His Thr Arg Trp		
580	585	590
His Pro Trp Asp Leu Asn Leu Ser Pro Arg Asn Leu Lys Leu Pro Leu		
595	600	605
Ala Leu Asn Gln Gly Gln Ile Arg Asn Ser Ser Gly His Phe Phe Glu		
610	615	620
Gly Gln Cys Gly Gly Lys Gly Ala Ala Ser Arg Leu Gly Glu Asp Leu		
625	630	635
Lys Asp Pro Asp Ser His Ser Phe Pro Leu Ala Gln		
645	650	

<210> 95
<211> 831
<212> DNA
<213> Homo Sapiens

<400> 95

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aaaacnattg cagaaaaacat ttagattnta taaaatatat aatnanancc aaaancatt	180
tgaanttaat nganccttac ctgtcncac taaatcaggg ttntctgcgc caccnaaggg	240
cngccccancg cctgctgtgt tggcttanta ggcctnagca tangggcagn tgcaatcctt	300
tcctcctnng gccccanatg ggcttctgga anaaccctt ccttatcccc ancgaaggc	360
ggcccccctccc ctgcccctnaa aggaaaacctc ntggacncag ggaatatang gccaccttga	420
aggggtggact ggctatcntg gaagatcaga taccaccaag caatttggag acagttcctg	480
ttgagaataa ccacggtttc catgaaaaga cagcagcgtc gaagcttgag gccgagggcg	540
aggccatgga agatgcagcc ggcgcaggga acgaccgagg cggcacacag gagccagccc	600
cagtgcctgc tgagccgtt gacaacacta cctacaagaa cctgcagcat catgactaca	660
gcacgtacac cttcttagac ctcaacctcg aactctcaa attcaggatg cctcagccct	720
cctcaggccg ggagtccacct cgacactgag ggcgcctcggt gtgaagatga accttccacc	780
gtcttcactg catcctggag tgcaaaaata aaatccactc aagagtcaaa a	831

<210> 96
<211> 184
<212> PRT
<213> Homo Sapiens

<400> 96

Arg Lys Asn Cys Arg Lys His Leu Asp Met Lys Tyr Ile Lys His Leu		
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Leu Pro Tyr Leu Ser Ser Leu Asn Gln Gly Leu Arg His Arg Ala Ala		
20	25	30
Arg Leu Leu Cys Trp Leu Arg Pro His Gly Cys Asn Pro Phe Leu Leu		
35	40	45
Arg Met Gly Phe Trp Asn Pro Leu Ile Pro Ala Arg Arg Pro Leu Pro		
50	55	60
Cys Pro Arg Lys Pro Gly Arg Glu Tyr Ala Thr Leu Lys Gly Gly Leu		
65	70	75
Ala Ile Glu Asp Gln Ile Pro Pro Ser Asn Leu Glu Thr Val Pro Val		
85	90	95

Glu Asn Asn His Gly His Glu Lys Thr Ala Ala Leu Lys Leu Glu
 100 105 110
 Ala Glu Gly Glu Ala Met Glu Asp Ala Ala Ala Pro Gly Asn Asp Arg
 115 120 125
 Gly Gly Thr Gln Glu Pro Ala Pro Val Pro Ala Glu Pro Phe Asp Asn
 130 135 140
 Thr Thr Tyr Lys Asn Leu Gln His His Asp Tyr Ser Thr Tyr Thr Phe
 145 150 155 160
 Leu Asp Leu Asn Leu Glu Leu Ser Lys Phe Arg Met Pro Gln Pro Ser
 165 170 175
 Ser Gly Arg Glu Ser Pro Arg His
 180

<210> 97
 <211> 1008
 <212> DNA
 <213> Homo Sapiens

<400> 97
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 ttccatcatga cccagttgcc cttgaagagc acttcaggga tgatgatgag ggtccagggt 120
 ccaaccaggc ctacatgcct tatttaaaca ggttcatttt ggaaaagggtc caagacaact 180
 ttgacaagat tgaattcaat aggatgtgtt ggaccctctg tgtcaaaaaa aacctcacaa 240
 agaatccccct gctcattaca gaagaanatg catttaaaat atgggttatt ttcaactttt 300
 tatctgagga caagtatcca ttaattatttg tgcagaana gattgaatac ctgcttaaga 360
 agcttacaga agctatggga ggaggtggc agcaagaaca atttgaacat tataaaatca 420
 actttgatga cagtaaaaat ggccttctg catggaaact tatttagctt attggaaatg 480
 gacagtttag caaaggcatg gaccggcaga ctgtgtctat ggcaattaat gaagtctta 540
 atgaacttat attagatgtg ttaaagcagg gttacatgat gaaaaaggc cacagacgga 600
 aaaactggac tgaacgatgg tttgtactaa aacccaacat aatttcttac tatgtgagtg 660
 aggatctgaa ggataagaaa ggagacattc tcttggatga aaattgctgt gttaggtcct 720
 tgcctgacaa agatggaaag aaatgcctt ttctcgtaaa atgtttgat aagactttg 780
 aaatcagtgc ttccgataag aanaanaaac aggagtggat tcaagccatt cattctacta 840
 ttcatctgtt gaagctgncc acgcctccac canacaaaaga agccnnccag cttctnaaan 900
 aactccggna gaatcatctg gctgaacaag angaactgga gcgacaaatg aangaactcc 960
 aagcccgcca atgaaagcaa ncagcaagag ctggaaggcc ttnccgaa 1008

<210> 98
 <211> 312
 <212> PRT
 <213> Homo Sapiens

<400> 98
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 Val Leu Lys Val Pro His Asp Pro Val Ala Leu Glu Glu His Phe Arg
 20 25 30
 Asp Asp Asp Glu Gly Pro Val Ser Asn Gln Gly Tyr Met Pro Tyr Leu
 35 40 45
 Asn Arg Phe Ile Leu Glu Lys Val Gln Asp Asn Phe Asp Lys Ile Glu
 50 55 60
 Phe Asn Arg Met Cys Trp Thr Leu Cys Val Lys Lys Asn Leu Thr Lys
 65 70 75 80
 Asn Pro Leu Leu Ile Thr Glu Glu Ala Phe Lys Ile Trp Val Ile Phe
 85 90 95

Asn Phe Leu Ser Glu Asp Lys Tyr Pro Leu Ile Ile Val Ser Glu Ile
 100 105 110
 Glu Tyr Leu Leu Lys Lys Leu Thr Glu Ala Met Gly Gly Gly Trp Gln
 115 120 125
 Gln Glu Gln Phe Glu His Tyr Lys Ile Asn Phe Asp Asp Ser Lys Asn
 130 135 140
 Gly Leu Ser Ala Trp Glu Leu Ile Glu Leu Ile Gly Asn Gly Gln Phe
 145 150 155 160
 Ser Lys Gly Met Asp Arg Gln Thr Val Ser Met Ala Ile Asn Glu Val
 165 170 175
 Phe Asn Glu Leu Ile Leu Asp Val Leu Lys Gln Gly Tyr Met Met Lys
 180 185 190
 Lys Gly His Arg Arg Lys Asn Trp Thr Glu Arg Trp Phe Val Leu Lys
 195 200 205
 Pro Asn Ile Ile Ser Tyr Tyr Val Ser Glu Asp Leu Lys Asp Lys Lys
 210 215 220
 Gly Asp Ile Leu Leu Asp Glu Asn Cys Cys Val Glu Ser Leu Pro Asp
 225 230 235 240
 Lys Asp Gly Lys Lys Cys Leu Phe Leu Val Lys Cys Phe Asp Lys Thr
 245 250 255
 Phe Glu Ile Ser Ala Ser Asp Lys Lys Gln Glu Trp Ile Gln Ala Ile
 260 265 270
 His Ser Thr Ile His Leu Leu Lys Leu Ser Pro Pro Pro Lys Glu Ala
 275 280 285
 Gln Leu Leu Lys Leu Arg Asn His Leu Ala Glu Gln Glu Leu Glu Arg
 290 295 300
 Gln Met Glu Leu Gln Ala Arg Gln
 305 310

<210> 99
 <211> 1009
 <212> DNA
 <213> Homo Sapiens

<400> 99

ggctaatgta acatactcta ccacttggtc tgaagccca	cagtatctga tggataatcc	60
aacctttgca gaagatgagg agttacaaaa tatggcacaa	gaagatgcataatttgctt	120
tgaagaacac attcgggctt tagaaaagga ggaagaagaa	gaaaaacaga agagtttgct	180
gagagaaaagg agacgcacgc gaaaaaatag ggaatcttc	cagatatttt tagatgaatt	240
acatgaacat ggacaactgc attctatgtc atcttggatg	gaatttgtatc caactattag	300
ttctgatatt agattcacta atatgcttgg tcagcctgga	tcaactgcac ttgatcttt	360
caagtttat gtgaggatc ttaaagcacg ttatcatgac	gagaagaaga taataaaaaga	420
cattctaaag gataaaggat ttgttagttga agtaaacact	actttgaag attttgtggc	480
gataatcagt tcaactaaaa gatcaactac attagatgtc	ggaaatatca aattggcttt	540
caatagtttta ctagaaaagg cagaagcccc tgaacgtgaa	agagaaaaag aagaggctcg	600
gaagatgaaa cgaaaagaat ctgcatttaa gagtatgtt	aaacaagctg ctcctccgat	660
agaattggat gctgtctggg aagatatccg tgagagattt	gtaaaagagc cagcatttga	720
ggacataact ctagaatctg aaagaaaacg aatattttaa	gattttatgc atgtgcttga	780
gcatgaatgt cagcatcatc attcaaagaa caagaaacat	tctaagaaaat ctaaaaaaaca	840
tcataggaaa cgttcccgct ctcgatcggg gtcagattca	ngatgatgat gatagccatt	900
caaagaaaaa aagacagcga tgagaagtct cggctcgntt	canaacattc ttccantngc	960
agagtctgag agaagtntaa aaagtcaaaa nagcatagan	aggaaaagtt	1009

<210> 100
 <211> 292

<212> PRT
 <213> Homo Sapiens

<400> 100
 Ala Asn Val Thr Tyr Ser Thr Trp Ser Glu Ala Gln Gln Tyr Leu
 1 5 10 15
 Met Asp Asn Pro Thr Phe Ala Glu Asp Glu Glu Leu Gln Asn Met Asp
 20 25 30
 Lys Glu Asp Ala Leu Ile Cys Phe Glu Glu His Ile Arg Ala Leu Glu
 35 40 45
 Lys Glu Glu Glu Glu Lys Gln Lys Ser Leu Leu Arg Glu Arg Arg
 50 55 60
 Arg Gln Arg Lys Asn Arg Glu Ser Phe Gln Ile Phe Leu Asp Glu Leu
 65 70 75 80
 His Glu His Gly Gln Leu His Ser Met Ser Trp Met Glu Leu Tyr
 85 90 95
 Pro Thr Ile Ser Ser Asp Ile Arg Phe Thr Asn Met Leu Gly Gln Pro
 100 105 110
 Gly Ser Thr Ala Leu Asp Leu Phe Lys Phe Tyr Val Glu Asp Leu Lys
 115 120 125
 Ala Arg Tyr His Asp Glu Lys Lys Ile Ile Lys Asp Ile Leu Lys Asp
 130 135 140
 Lys Gly Phe Val Val Glu Val Asn Thr Thr Phe Glu Asp Phe Val Ala
 145 150 155 160
 Ile Ile Ser Ser Thr Lys Arg Ser Thr Thr Leu Asp Ala Gly Asn Ile
 165 170 175
 Lys Leu Ala Phe Asn Ser Leu Leu Glu Lys Ala Glu Ala Arg Glu Arg
 180 185 190
 Glu Arg Glu Lys Glu Ala Arg Lys Met Lys Arg Lys Glu Ser Ala
 195 200 205
 Phe Lys Ser Met Leu Lys Gln Ala Ala Pro Pro Ile Glu Leu Asp Ala
 210 215 220
 Val Trp Glu Asp Ile Arg Glu Arg Phe Val Lys Glu Pro Ala Phe Glu
 225 230 235 240
 Asp Ile Thr Leu Glu Ser Glu Arg Lys Arg Ile Phe Lys Asp Phe Met
 245 250 255
 His Val Leu Glu His Glu Cys Gln His His His Ser Lys Asn Lys Lys
 260 265 270
 His Ser Lys Lys Ser Lys Lys His His Arg Lys Arg Ser Arg Ser Arg
 275 280 285
 Ser Gly Ser Asp
 290

<210> 101
 <211> 983
 <212> DNA
 <213> Homo Sapiens

<400> 101
 aggtgacaaat agatatacgaa gtacgttgat gtgcgaagat gtattttgtt ttagccagcg 60
 aggaaaaaaag aatcagtttg attatacatt taccaaacat taagaattta atatggtaac 120
 ttttatttca gtattaaaat agcaatttttta ttttattactt ttttatatat agaattttgac 180
 accaaatttt ggaacttaaaa aagaagattc ttaaaaactta caatccagat tacgatgagg 240
 acctggtgca ggaagcttca tctgaagatg tcctggcgt tcataatggtg gacaaagaca 300
 cagagagaga cattgagatg aaacggcaac tacggcgtc acgggagctc cacctataca 360

gcacatggaa gaagtaccaa gaggcgatga agacatcctt gggagttcca caacgtgagc	420
gtgacgaagg ctcctggc aagccattgt gtccacccga gatactctcg gagacgtgc	480
caggctctgt gaagaaaagg gtatgccttc catcagaaga tcatcttagag gagtttatag	540
cagaacatct ccctgaagca tccaatcaga gtctcctcac tggtgcccat gcagacgcag	600
gcacccaaac caacggtgac ctggaagacc tggaggagca tggccaggc cagacagtct	660
ctgaggaagc cacagaagtt cacatgatgg agggggaccc agacacactg gccgaacctc	720
tgatcagggc tgtacttcag gagctgtcca gttacaacgg cgaggaggag gacccanagg	780
aggtgaagac atccctggc gttccacaac gtggtgaccc ggaagacctg gaggagcatg	840
tgncaggcga gnnttctct gaggaagcca caggggttca catgatgcag gtggacccag	900
ccacgctggc aaagagtgac ctggaagacc tggaggagca tgtgccagag cagacagtct	960
ctgaggaagc cacaggggtt cac	983

<210> 102

<211> 230

<212> PRT

<213> Homo Sapiens

<400> 102

Met Val Asp Lys Asp Thr Glu Arg Asp Ile Glu Met Lys Arg Gln Leu	
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Arg Arg Leu Arg Glu Leu His Leu Tyr Ser Thr Trp Lys Lys Tyr Gln	
20 25 30	
Glu Ala Met Lys Thr Ser Leu Gly Val Pro Gln Arg Glu Arg Asp Glu	
35 40 45	
Gly Ser Leu Gly Lys Pro Leu Cys Pro Pro Glu Ile Leu Ser Glu Thr	
50 55 60	
Leu Pro Gly Ser Val Lys Lys Arg Val Cys Phe Pro Ser Glu Asp His	
65 70 75 80	
Leu Glu Glu Phe Ile Ala Glu His Leu Pro Glu Ala Ser Asn Gln Ser	
85 90 95	
Leu Leu Thr Val Ala His Ala Asp Ala Gly Thr Gln Thr Asn Gly Asp	
100 105 110	
Leu Glu Asp Leu Glu Glu His Gly Pro Gly Gln Thr Val Ser Glu Glu	
115 120 125	
Ala Thr Glu Val His Met Met Glu Gly Asp Pro Asp Thr Leu Ala Glu	
130 135 140	
Leu Leu Ile Arg Asp Val Leu Gln Glu Leu Ser Ser Tyr Asn Gly Glu	
145 150 155 160	
Glu Glu Asp Pro Glu Val Lys Thr Ser Leu Gly Val Pro Gln Arg Gly	
165 170 175	
Asp Leu Glu Asp Leu Glu Glu His Val Gly Gln Phe Ser Glu Glu Ala	
180 185 190	
Thr Gly Val His Met Met Gln Val Asp Pro Ala Thr Leu Ala Lys Ser	
195 200 205	
Asp Leu Glu Asp Leu Glu Glu His Val Pro Glu Gln Thr Val Ser Glu	
210 215 220	
Glu Ala Thr Gly Val His	
225 230	

<210> 103

<211> 843

<212> DNA

<213> Homo Sapiens

<400> 103

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cacgcctt	ctacccaagat	gatagacagg	atcttctcg	gagcagtcac	acgaggcaga	180
aaagtgcaga	aggaagggaa	gatcagctat	gccgactttg	tctggtttt	gatctctgag	240
gaagacaaaa	aaacaccgac	cagcatcgag	tactggttcc	gctgcatgga	cctggacggg	300
gacggcgccc	tgtccatgtt	cgagctcgag	tacttctacg	aggagcagt	ccgaaggctg	360
gacagcatgg	ccatcgaggc	cctgcccctc	caggactgccc	tctgccagat	gctggacctg	420
gtcaagccga	ggactgaagg	gaagatcag	ctgcaggacc	tgaagcgt	caagctggcc	480
aacgtttct	tcgacacctt	cttcaacatc	gagaagtncc	tcgaccacga	gcagaaaagag	540
cagatctccc	tgctcaggga	cggtgacagc	ggcgcccccg	agctctcgga	ctgggagaag	600
tnccggccga	agagtnncgac	atcctggtgg	ccgangaaac	cgtggggana	nccctgggga	660
agacgggttc	naaggcgaac	tcacccccc	ggancanaaa	ctgantgcgc	tgcgctcccc	720
gctgggccan	aggccttctt	ccaagcgcct	cccgctgggg	cgccgtggaa	ctgttncaaa	780
ttccctgcg	gggacaagaa	cttgaaaccg	ctgtganncc	cccccnana	accnnccccg	840
gnt						843

<210> 104

<211> 197

<212> PRT

<213> Homo Sapiens

<400> 104

Arg	Cys	Arg	Ser	Thr	Leu	Val	Asp	Pro	Lys	Asn	Ser	Ala	Arg	Gly	Lys
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Phe	Trp	Glu	Leu	Asp	Thr	Asp	His	Asp	Leu	Leu	Ile	Asp	Ala	Asp	Asp
					20				25			30			
Leu	Ala	Arg	His	Asn	Asp	His	Ala	Leu	Ser	Thr	Lys	Met	Ile	Asp	Arg
					35				40			45			
Ile	Phe	Ser	Gly	Ala	Val	Thr	Arg	Gly	Arg	Lys	Val	Gln	Lys	Glu	Gly
					50				55			60			
Lys	Ile	Ser	Tyr	Ala	Asp	Phe	Val	Trp	Phe	Leu	Ile	Ser	Glu	Glu	Asp
					65				70			75			80
Lys	Lys	Thr	Pro	Thr	Ser	Ile	Glu	Tyr	Trp	Phe	Arg	Cys	Met	Asp	Leu
					85				90			95			
Asp	Gly	Asp	Gly	Ala	Leu	Ser	Met	Phe	Glu	Leu	Glu	Tyr	Phe	Tyr	Glu
					100				105			110			
Glu	Gln	Cys	Arg	Arg	Leu	Asp	Ser	Met	Ala	Ile	Glu	Ala	Leu	Pro	Phe
					115				120			125			
Gln	Asp	Cys	Leu	Cys	Gln	Met	Leu	Asp	Leu	Val	Lys	Pro	Arg	Thr	Glu
					130				135			140			
Gly	Lys	Ile	Thr	Leu	Gln	Asp	Leu	Lys	Arg	Cys	Lys	Leu	Ala	Asn	Val
					145				150			155			160
Phe	Phe	Asp	Thr	Phe	Phe	Asn	Ile	Glu	Lys	Leu	Asp	His	Glu	Gln	Lys
					165				170			175			
Glu	Gln	Ile	Ser	Leu	Leu	Arg	Asp	Gly	Asp	Ser	Gly	Gly	Pro	Glu	Leu
					180				185			190			
Ser	Asp	Trp	Glu	Lys											
				195											

<210> 105

<211> 2264

<212> DNA

<213> Homo Sapiens

<400> 105

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cgacaacagg gcttattat gaccccaact cgcaatacta ctataattcc ttgaccaggc	180
agtacctta ctggatggg gaaaaagaga cctacgtgcc agctgcagag tctagctccc	240
accagcagtc gggctgcct cctgcaaaag aggggaaaga gaagaaggag aaacccaaga	300
gcaaaacaggc ccagcagatt gccaaagaca tggAACGCTG ggctaagagt ttgaataagc	360
agaaaagaaaa cttaaaaat agcttcagc ctgtcaattc cttgagggaa gaagaaagga	420
gagaatctgc tgcagcagac gctggcttg ctctcttga gaagaaggga gccttagctg	480
aaaggcagca gctcatccca gaattgggtgc gaaatggaga tgaggagaat cccctcaaaa	540
ggggctgttgt tgctgcttac agtggtgaca gtgacaatga ggaggagctg gtggagagac	600
tttagagatga ggaagagaag cttagctgact ggaagaagat ggcctgtctg ctctgcccgc	660
gccagttccc gaacaaagat gccctagtca ggcaccagca actctcagac cttcacaagc	720
aaaacatgga catctaccga cgatccaggc tgagcggagca ggagctggaa gccttgagc	780
taagggagag agagatgaaa taccgagacc gagctgcaga aagacgggg aagtacggca	840
ttccagaacc tccagagccc aagcgcaaga agcagttga tgccggact gtgaattacg	900
agcaacccac caaatggc attgaccaca gtaacattgg caacaagatg ctgcaggcca	960
tgggctggcg ggaaggctct ggcttggac gaaagtgtca aggattacg gctccattg	1020
aggctcaagt tcgctaaag ggagctggcc taggagccaa aggacagcga tatggttgt	1080
cgggcgcgca ttccctacaaa gatgctgtcc ggaaagccat gtttgcggg ttcaactgaga	1140
tggagtgaga gagagagaga gagagagatg acaaggagca caagaagtgg tccatctccc	1200
gaattcgctg ttaccgcctg tctcttaag gcatgcctt gtgctgtta tagatcttag	1260
ggtaaccac ttcatctgc agggctctcc ctccccaccc aaagaagttc cccttatgtg	1320
ggttgcctgg tgaatggcct tcctccgc cagagggcctt gtgaacagac cggagaggac	1380
agtggattgt ttatactcca gtgtacatag tgaatgttag cgttataca tggtagcct	1440
atgttgggtt ccatcagccc ctcacattcc taggggtttt agatgtgtt ggtgtatgt	1500
gacaccaaa ccacctctgt cattttgtt gatgtcttt cttggcaaaa gcctgtgtt	1560
tatttgtata ttacacattt gtacagaatt ttggaagatt ttcaatccaa gttgccaaat	1620
ctggctcctt tacaagaa atacattttag aaaaaaaaaa annaaaaaaa annnnccnan	1680
nnnttttaa aanggnncgg gggcaannn tttccnncc gggngggna nnaagtaaan	1740
ngtcccaat ncccccaaa nggagccnn ttaaaattaa anggcccgn ntttaaaan	1800
nttcngaatn gggnaaaccn tngggtttn ccaaatttaa cccctttagaa aaaaanccc	1860
ctttcncaa annnnntaa tanccaaaaa gggcccccan ccattttgc ccnttccaaa	1920
aaaatttgnca caancnnnaa atgggnnaan ggggaatcca atttttaaa gggnnnaaaan	1980
gggtttaaac nnacgggnntt ccaaantgn ttgggggaat tttaaattc ccaannnncc	2040
aagggggnca atttagnggn ccccnaatcc cccaaaaant ggtcnnggn tnaaancngc	2100
cnnnnccnaa ttntanggg ttacttngn ttaaaaaaac ccnccaaaaa actccccnn	2160
gaaccnaaaa aaaaaagga ngccatttt ngnngnaaac ttttaann nnccnnntaa	2220
angggttaaa aaannnnnnn tnnnccnaa ttttcaaan aang	2264

<210> 106
<211> 381
<212> PRT
<213> Homo Sapiens

<400> 106															
Ser	Thr	Ser	Thr	Gln	Ala	Pro	Ala	Ala	Ser	Pro	Thr	Gly	Val	Val	Pro
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Gly	Thr	Lys	Tyr	Ala	Val	Pro	Asp	Thr	Ser	Thr	Tyr	Gln	Tyr	Asp	Glu
					20				25				30		
Ser	Ser	Gly	Tyr	Tyr	Tyr	Asp	Pro	Thr	Thr	Gly	Leu	Tyr	Tyr	Asp	Pro
													45		
Asn	Ser	Gln	Tyr	Tyr	Tyr	Asn	Ser	Leu	Thr	Gln	Gln	Tyr	Leu	Tyr	Trp
															50
Asp	Gly	Glu	Lys	Glu	Thr	Tyr	Val	Pro	Ala	Ala	Glu	Ser	Ser	Ser	His
															65
															70
															75
															80

Gln Gln Ser Gly Leu Pro Pro Ala Lys Glu Gly Lys Glu Lys Lys Glu
 85 90 95
 Lys Pro Lys Ser Lys Thr Ala Gln Gln Ile Ala Lys Asp Met Glu Arg
 100 105 110
 Trp Ala Lys Ser Leu Asn Lys Gln Lys Glu Asn Phe Lys Asn Ser Phe
 115 120 125
 Gln Pro Val Asn Ser Leu Arg Glu Glu Glu Arg Arg Glu Ser Ala Ala
 130 135 140
 Ala Asp Ala Gly Phe Ala Leu Phe Glu Lys Lys Gly Ala Leu Ala Glu
 145 150 155 160
 Arg Gln Gln Leu Ile Pro Glu Leu Val Arg Asn Gly Asp Glu Glu Asn
 165 170 175
 Pro Leu Lys Arg Gly Leu Val Ala Ala Tyr Ser Gly Asp Ser Asp Asn
 180 185 190
 Glu Glu Glu Leu Val Glu Arg Leu Glu Ser Glu Glu Lys Leu Ala
 195 200 205
 Asp Trp Lys Lys Met Ala Cys Leu Leu Cys Arg Arg Gln Phe Pro Asn
 210 215 220
 Lys Asp Ala Leu Val Arg His Gln Gln Leu Ser Asp Leu His Lys Gln
 225 230 235 240
 Asn Met Asp Ile Tyr Arg Arg Ser Arg Leu Ser Glu Gln Glu Leu Glu
 245 250 255
 Ala Leu Glu Leu Arg Glu Arg Glu Met Lys Tyr Arg Asp Arg Ala Ala
 260 265 270
 Glu Arg Arg Glu Lys Tyr Gly Ile Pro Glu Pro Pro Glu Pro Lys Arg
 275 280 285
 Lys Lys Gln Phe Asp Ala Gly Thr Val Asn Tyr Glu Gln Pro Thr Lys
 290 295 300
 Asp Gly Ile Asp His Ser Asn Ile Gly Asn Lys Met Leu Gln Ala Met
 305 310 315 320
 Gly Trp Arg Glu Gly Ser Gly Leu Gly Arg Lys Cys Gln Gly Ile Thr
 325 330 335
 Ala Pro Ile Glu Ala Gln Val Arg Leu Lys Gly Ala Gly Leu Gly Ala
 340 345 350
 Lys Gly Ser Ala Tyr Gly Leu Ser Gly Ala Asp Ser Tyr Lys Asp Ala
 355 360 365
 Val Arg Lys Ala Met Phe Ala Arg Phe Thr Glu Met Glu
 370 375 380

<210> 107
 <211> 1367
 <212> DNA
 <213> Homo Sapiens

<400> 107

gcgacacagg cctcgaggct gtctctgaca agtgttcaca ggaggtgggg acgcctctgc	60
gcgaggaacg aggagctacg ggcctgggcc cggttattgc catggcagc ggctgccca	120
tccaatgcat attcttcagc gagttccacc ccacgctggg acccaagatc acctatcagg	180
tccctgaaga ctcatctcc cgagagctgt ttgacacagt ccaagtgtac atcatcacca	240
agccagagct gcagaacaag cttatcaactg tcaacagctat ggaaaagaag ctgatcggt	300
gtcctgtgtg catcaaac aagaagtaca gcccataatgc tctcccttcc aacctgggt	360
tcgtgtgtga tgcccaggcc aagacctgctg ccctcgagcc cattgttaaa aagctggctg	420
gctatctgac cacacttagag ctagagagca gcttcgtgtc catggaggag agcaagcaga	480
agtttgtgcc catcatgacc atcttgcgtgg aggagctaaa tgcctcaggc cggtgactc	540
tgcccattga tgagtccaaac accatccact tgaaggtgat tgagcagcgg ccagaccctc	600

cggtgtggcca ggagtatgtat gtacctgtct ttaccaaaga caaggaggat ttcttcaact 660
 cacagtggga cctcaactaca caacaaatcc tgccctacat tgatggggtc cgccacatcc 720
 agaagattc agcagaggca gatgtggagc tcaacacctgt gcgcattgtc atccagaacc 780
 tgctgtacta cggcggttg acactgggt ccatacctcca gtactccat gtatactgcc 840
 caacgccccaa ggtccaggac ctggtagatg acaagtcct gcaagaggca tgtctatcc 900
 acgtgaccaa gcaaggcac aagaggcga gtctccggga tgtgttccag ctatactgca 960
 gcctgagccc tggcactacc gtgcgagacc tcattggccg ccaccccccag cagctgcagc 1020
 atgttgatga acggaagctg atccagttcg ggcttatgaa gaacctcatc aggcgactac 1080
 agaagtatcc tgtgcgggtg actcgggaaag agcagagcca ccctgcccgg ctttatacag 1140
 gctgccacag ctatgacgag atctgctgca agacaggcat gagtaccat gagctggatg 1200
 agcggctgtaaatgacac aacatcatca tctgctggaa gtgaggctgg tagtgactgg 1260
 atggacacat tgctgtgggt agtccctcct actaggagcc ttgtcatact gtctagaggt 1320
 tgactcttag ttctgttaat aaagacatcc atttcaaaca gccaaaa 1367

<210> 108
 <211> 413
 <212> PRT
 <213> Homo Sapiens

<400> 108
 Asp Thr Gly Leu Glu Ala Val Ser Asp Lys Cys Ser Gln Glu Val Gly
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 Thr Pro Leu Arg Glu Glu Arg Gly Ala Thr Gly Leu Gly Pro Val Ile
 20 25 30
 Ala Met Gly Ser Gly Cys Arg Ile Glu Cys Ile Phe Phe Ser Glu Phe
 35 40 45
 His Pro Thr Leu Gly Pro Lys Ile Thr Tyr Gln Val Pro Glu Asp Phe
 50 55 60
 Ile Ser Arg Glu Leu Phe Asp Thr Val Gln Val Tyr Ile Ile Thr Lys
 65 70 75 80
 Pro Glu Leu Gln Asn Lys Leu Ile Thr Val Thr Ala Met Glu Lys Lys
 85 90 95
 Leu Ile Gly Cys Pro Val Cys Ile Glu His Lys Lys Tyr Ser Arg Asn
 100 105 110
 Ala Leu Leu Phe Asn Leu Gly Phe Val Cys Asp Ala Gln Ala Lys Thr
 115 120 125
 Cys Ala Leu Glu Pro Ile Val Lys Lys Leu Ala Gly Tyr Leu Thr Thr
 130 135 140
 Leu Glu Leu Glu Ser Ser Phe Val Ser Met Glu Glu Ser Lys Gln Lys
 145 150 155 160
 Leu Val Pro Ile Met Thr Ile Leu Leu Glu Leu Asn Ala Ser Gly
 165 170 175
 Arg Cys Thr Leu Pro Ile Asp Glu Ser Asn Thr Ile His Leu Lys Val
 180 185 190
 Ile Glu Gln Arg Pro Asp Pro Pro Val Ala Gln Glu Tyr Asp Val Pro
 195 200 205
 Val Phe Thr Lys Asp Lys Glu Asp Phe Phe Asn Ser Gln Trp Asp Leu
 210 215 220
 Thr Thr Gln Gln Ile Leu Pro Tyr Ile Asp Gly Phe Arg His Ile Gln
 225 230 235 240
 Lys Ile Ser Ala Glu Ala Asp Val Glu Leu Asn Leu Val Arg Ile Ala
 245 250 255
 Ile Gln Asn Leu Leu Tyr Tyr Gly Val Val Thr Leu Val Ser Ile Leu
 260 265 270
 Gln Tyr Ser Asn Val Tyr Cys Pro Thr Pro Val Val Gin Asp Leu Val

275	280	285
Asp Asp Lys Ser Leu Gln Glu Ala Cys Leu Ser Tyr Val Thr Lys Gln		
290	295	300
Gly His Lys Arg Ala Ser Leu Arg Asp Val Phe Gln Leu Tyr Cys Ser		
305	310	315
Leu Ser Pro Gly Thr Thr Val Arg Asp Leu Ile Gly Arg His Pro Gln		
325	330	335
Gln Leu Gln His Val Asp Glu Arg Lys Leu Ile Gln Phe Gly Leu Met		
340	345	350
Lys Asn Leu Ile Arg Arg Leu Gln Lys Tyr Pro Val Arg Val Thr Arg		
355	360	365
Glu Glu Gln Ser His Pro Ala Arg Leu Tyr Thr Gly Cys His Ser Tyr		
370	375	380
Asp Glu Ile Cys Cys Lys Thr Gly Met Ser Tyr His Glu Leu Asp Glu		
385	390	395
Arg Leu Glu Asn Asp Pro Asn Ile Ile Ile Cys Trp Lys		
405	410	

<210> 109
<211> 2113
<212> DNA
<213> Homo Sapiens

<400> 109	
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ctatggagca ggtcaatgag ctgaaggaga aaggcaacaa ggccctgagc gtgggtaaca	120
tgcgtatgc cttacagtgc tactccgaag ctattaagct ggatccccac aaccacgtgc	180
tgtacagcaa ccgttctgct gcctatgcca agaaaggaga ctaccagaag gcttatgagg	240
atggctgcaa gactgtcgac ctaaaggcctg actggggcaa gggctattca cggaaaagcag	300
cagctctaga gttcttaaac cgcttgaag aagccaagcg aacctatgag gagggcttaa	360
aacacgaggc aaataaccct caactgaaag agggtttaca gaatatggag gccagggttgg	420
cagagagaaa attcatgaac ccttcaaca tgcctaattct gtatcagaag ttggagagtg	480
atcccaggac aaggacacta ctcagtgtac ctacctaccg ggagctgata gagcagctac	540
gaaacaagcc ttctgacctg ggcacgaaac tacaagatcc ccggatcatg accactctca	600
gcgtcctcct tggggtcgtat ctggcagta tggatgagga ggaagagatt gcaacaccc	660
caccaccacc ccctcccaa aaggagacca agccagagcc aatggaaagaa gatcttccag	720
agaataagaa gcagggactg aaagaaaaag agctggggaa cgatgcctac aagaagaaag	780
actttgacac agccttgaag cattacgaca aagccaagga gctggacccc actaacatga	840
cttacattac caatcaagca gcggtatact ttgaaaaggcg cgactacaat aagtgcgggg	900
agctttgtga gaaggccatt gaagtggggaa gagaaaaaccg agaagactat cgacagattg	960
ccaaagcata tgctcgaatt ggcaactcct acttcaaaga agaaaaagtac aaggatgcc	1020
tccatttcta taacaagtct ctggcagagc accgaacccc agatgtgctc aagaaatgcc	1080
agcaggcaga gaaaatcctg aaggagcaag agcggctggc ctacataaac cccgacctgg	1140
ctttggagga gaagaacaaa ggaacacgat gtttcagaa aggggactat ccccaggcca	1200
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<210> 110
<211> 543
<212> PRT
<213> Homo Sapiens

<400> 110
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35 40 45
Ala Lys Lys Gly Asp Tyr Gln Lys Ala Tyr Glu Asp Gly Cys Lys Thr
50 55 60
Val Asp Leu Lys Pro Asp Trp Gly Lys Gly Tyr Ser Arg Lys Ala Ala
65 70 75 80
Ala Leu Glu Phe Leu Asn Arg Phe Glu Glu Ala Lys Arg Thr Tyr Glu
85 90 95
Glu Gly Leu Lys His Glu Ala Asn Asn Pro Gln Leu Lys Glu Gly Leu
100 105 110
Gln Asn Met Glu Ala Arg Leu Ala Glu Arg Lys Phe Met Asn Pro Phe
115 120 125
Asn Met Pro Asn Leu Tyr Gln Lys Leu Glu Ser Asp Pro Arg Thr Arg
130 135 140
Thr Leu Leu Ser Asp Pro Thr Tyr Arg Glu Leu Ile Glu Gln Leu Arg
145 150 155 160
Asn Lys Pro Ser Asp Leu Gly Thr Lys Leu Gln Asp Pro Arg Ile Met
165 170 175
Thr Thr Leu Ser Val Leu Leu Gly Val Asp Leu Gly Ser Met Asp Glu
180 185 190
Glu Glu Glu Ile Ala Thr Pro Pro Pro Pro Pro Pro Lys Lys Glu
195 200 205
Thr Lys Pro Glu Pro Met Glu Glu Asp Leu Pro Glu Asn Lys Lys Gln
210 215 220
Ala Leu Lys Glu Lys Glu Leu Gly Asn Asp Ala Tyr Lys Lys Lys Asp
225 230 235 240
Phe Asp Thr Ala Leu Lys His Tyr Asp Lys Ala Lys Glu Leu Asp Pro
245 250 255
Thr Asn Met Thr Tyr Ile Thr Asn Gln Ala Ala Val Tyr Phe Glu Lys
260 265 270
Gly Asp Tyr Asn Lys Cys Arg Glu Leu Cys Glu Lys Ala Ile Glu Val
275 280 285
Gly Arg Glu Asn Arg Glu Asp Tyr Arg Gln Ile Ala Lys Ala Tyr Ala
290 295 300
Arg Ile Gly Asn Ser Tyr Phe Lys Glu Glu Lys Tyr Lys Asp Ala Ile
305 310 315 320
His Phe Tyr Asn Lys Ser Leu Ala Glu His Arg Thr Pro Asp Val Leu
325 330 335
Lys Lys Cys Gln Gln Ala Glu Lys Ile Leu Lys Glu Gln Glu Arg Leu

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Glu Cys Phe Gln Lys Gly Asp Tyr Pro Gln Ala Met Lys His Tyr Thr		
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Glu Ala Ile Lys Arg Asn Pro Lys Asp Ala Lys Leu Tyr Ser Asn Arg		
385	390	395
400		
Ala Ala Cys Tyr Thr Lys Leu Leu Glu Phe Gln Leu Ala Leu Lys Asp		
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Cys Glu Glu Cys Ile Gln Leu Glu Pro Thr Phe Ile Lys Gly Tyr Thr		
420	425	430
Arg Lys Ala Ala Ala Leu Glu Ala Met Lys Asp Tyr Thr Lys Ala Met		
435	440	445
Asp Val Tyr Gln Lys Ala Leu Asp Leu Asp Ser Ser Cys Lys Glu Ala		
450	455	460
Ala Asp Gly Tyr Gln Arg Cys Met Met Ala Gln Tyr Asn Arg His Asp		
465	470	475
480		
Ser Pro Glu Asp Val Lys Arg Arg Ala Met Ala Asp Pro Glu Val Gln		
485	490	495
Gln Ile Met Ser Asp Pro Ala Met Arg Leu Ile Leu Glu Gln Met Gln		
500	505	510
Lys Asp Pro Gln Ala Leu Ser Glu His Leu Lys Asn Pro Val Ile Ala		
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<210> 111
<211> 2765
<212> DNA
<213> Homo Sapiens

<400> 111	
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caacccaccc cttggaaat gaagtataag aatcttatgg caagggcatt atatgacaat	180
gtcccagagt gtgccgagga actggccccc cgcaaggag acatctgtac cgtcatagag	240
cagaacacag gggactggaa aggtggctgg ctgtgtctgt tacacggctg gcaaggcatt	300
gtcccaggca accgggtgaa gcttctgatt gttccatgc aggagactgc ctccagtcac	360
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gatgtctatg atatccctcc ttctcataacc actcaagggg tatacgacat ccctccctca	720
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<210> 112
 <211> 834
 <212> PRT
 <213> Homo Sapiens

<400> 112

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					20				25				30		
Ile	Glu	Gln	Asn	Thr	Gly	Gly	Leu	Glu	Gly	Trp	Trp	Leu	Cys	Ser	Leu
					35				40			45			
His	Gly	Arg	Gln	Gly	Ile	Val	Pro	Gly	Asn	Arg	Val	Lys	Leu	Leu	Ile
					50				55			60			
Gly	Pro	Met	Gln	Glu	Thr	Ala	Ser	Ser	His	Glu	Gln	Pro	Ala	Ser	Gly
					65				70			75		80	
Leu	Met	Gln	Gln	Thr	Phe	Gly	Gln	Gln	Lys	Leu	Tyr	Gln	Val	Pro	Asn
					85				90			95			
Pro	Gln	Ala	Ala	Pro	Arg	Asp	Thr	Ile	Tyr	Gln	Val	Pro	Pro	Ser	Tyr
					100				105			110			
Gln	Asn	Gln	Gly	Ile	Tyr	Gln	Val	Pro	Thr	Gly	His	Gly	Thr	Gln	Glu
					115				120			125			
Gln	Glu	Val	Tyr	Gln	Val	Pro	Pro	Ser	Val	Gln	Arg	Ser	Ile	Gly	Gly
					130				135			140			
Thr	Ser	Gly	Pro	His	Val	Gly	Lys	Lys	Val	Ile	Thr	Pro	Val	Arg	Thr
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Gly	His	Gly	Tyr	Val	Tyr	Glu	Tyr	Pro	Ser	Arg	Tyr	Gln	Lys	Asp	Val
					165				170			175			
Tyr	Asp	Ile	Pro	Pro	Ser	His	Thr	Thr	Gln	Gly	Val	Tyr	Asp	Ile	Pro
					180				185			190			

Pro Ser Ser Ala Lys Gly Pro Val Phe Ser Val Pro Val Gly Glu Ile
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 Lys Pro Gln Gly Val Tyr Asp Ile Pro Pro Thr Lys Gly Val Tyr Ala
 210 215 220
 Ile Pro Pro Ser Ala Cys Arg Asp Glu Ala Gly Leu Arg Glu Lys Asp
 225 230 235 240
 Tyr Asp Phe Pro Pro Met Arg Gln Ala Gly Arg Pro Asp Leu Arg
 245 250 255
 Pro Glu Gly Val Tyr Asp Ile Pro Pro Thr Cys Thr Lys Pro Ala Gly
 260 265 270
 Lys Asp Leu His Val Lys Tyr Asn Cys Asp Ile Pro Gly Ala Ala Glu
 275 280 285
 Pro Val Ala Arg Arg His Gln Ser Leu Ser Pro Asn His Pro Pro Pro
 290 295 300
 Gln Leu Gly Gln Ser Val Gly Ser Gln Asn Asp Ala Tyr Asp Val Pro
 305 310 315 320
 Arg Gly Val Gln Phe Leu Glu Pro Pro Ala Glu Thr Ser Glu Lys Ala
 325 330 335
 Asn Pro Gln Glu Arg Asp Gly Val Tyr Asp Val Pro Leu His Asn Pro
 340 345 350
 Pro Asp Ala Lys Gly Ser Arg Asp Leu Val Asp Gly Ile Asn Arg Leu
 355 360 365
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 370 375 380
 Thr Ser Ser Lys Glu Ser Ser Leu Ser Ala Ser Pro Ala Gln Asp Lys
 385 390 395 400
 Arg Leu Phe Leu Asp Pro Asp Thr Ala Ile Glu Arg Leu Gln Arg Leu
 405 410 415
 Gln Gln Ala Leu Glu Met Gly Val Ser Ser Leu Met Ala Leu Val Thr
 420 425 430
 Thr Asp Trp Arg Cys Tyr Gly Tyr Met Glu Arg His Ile Asn Glu Ile
 435 440 445
 Arg Thr Ala Val Asp Lys Val Glu Leu Phe Leu Lys Glu Tyr Leu His
 450 455 460
 Phe Val Lys Gly Ala Val Ala Asn Ala Ala Cys Leu Pro Glu Leu Ile
 465 470 475 480
 Leu His Asn Lys Met Lys Arg Glu Leu Gln Arg Val Glu Asp Ser His
 485 490 495
 Gln Ile Leu Ser Gln Thr Ser His Asp Leu Asn Glu Cys Ser Trp Ser
 500 505 510
 Leu Asn Ile Leu Ala Ile Asn Lys Pro Gln Asn Lys Cys Asp Asp Leu
 515 520 525
 Asp Arg Phe Val Met Val Ala Lys Thr Val Pro Asp Asp Ala Lys Gln
 530 535 540
 Leu Thr Thr Thr Ile Asn Thr Asn Ala Glu Ala Leu Phe Arg Pro Gly
 545 550 555 560
 Pro Gly Ser Leu His Leu Lys Asn Gly Pro Glu Ser Ile Met Asn Ser
 565 570 575
 Thr Glu Tyr Pro His Gly Gly Ser Gln Gly Gln Leu Leu His Pro Gly
 580 585 590
 Asp His Lys Ala Gln Ala His Asn Lys Ala Leu Pro Pro Gly Leu Ser
 595 600 605
 Lys Glu Gln Ala Pro Asp Cys Ser Ser Ser Asp Gly Ser Glu Arg Ser
 610 615 620
 Trp Met Asp Asp Tyr Asp Tyr Val His Leu Gln Gly Lys Glu Glu Phe

625	630	635	640
Glu Arg Gln Gln Lys Glu Leu Leu Glu Lys Glu Asn Ile Met Lys Gln			
645	650	655	
Asn Lys Met Gln Leu Glu His His Gln Leu Ser Gln Phe Gln Leu Leu			
660	665	670	
Glu Gln Glu Ile Thr Lys Pro Val Glu Asn Asp Ile Ser Lys Trp Lys			
675	680	685	
Pro Ser Gln Ser Leu Pro Thr Thr Asn Ser Gly Val Ser Ala Gln Asp			
690	695	700	
Arg Gln Leu Leu Cys Phe Tyr Tyr Asp Gln Cys Glu Thr His Phe Ile			
705	710	715	720
Ser Leu Leu Asn Ala Ile Asp Ala Leu Phe Ser Cys Val Ser Ser Ala			
725	730	735	
Gln Pro Pro Arg Ile Phe Val Ala His Ser Lys Phe Val Ile Leu Ser			
740	745	750	
Ala His Lys Leu Val Phe Ile Gly Asp Thr Leu Thr Arg Gln Val Thr			
755	760	765	
Ala Gln Asp Ile Arg Asn Lys Val Met Asn Ser Ser Asn Gln Leu Cys			
770	775	780	
Glu Gln Leu Lys Thr Ile Val Met Ala Thr Lys Met Ala Ala Leu His			
785	790	795	800
Tyr Pro Ser Thr Thr Ala Leu Gln Glu Met Val His Gln Val Thr Asp			
805	810	815	
Leu Ser Arg Asn Ala Gln Leu Phe Lys Arg Ser Leu Leu Glu Met Ala			
820	825	830	
Thr Phe			

<210> 113
 <211> 3429
 <212> DNA
 <213> Homo Sapiens

<400> 113

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ctagattc	ca	cagg	act	caa	actaatac	2940
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gaaggc	atgt	ccc	tttgc	tttgc	tttgc	3300
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<210> 114
 <211> 906
 <212> PRT
 <213> Homo Sapiens

<400> 114																
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																30
Val	Thr	Gln	Val	Thr	Leu	Val	Asn	Thr	Asn	Ser	Lys	Gly	Pro	Ser		
																45
Asn	Lys	Lys	Arg	Gly	Arg	Ser	Lys	Lys	Ala	His	Val	Leu	Ala	Ala	Ser	
																50
Val	Glu	Gln	Ala	Thr	Glu	Asn	Phe	Leu	Glu	Lys	Gly	Asp	Lys	Ile	Ala	
																60
Lys	Glu	Ser	Gln	Phe	Leu	Lys	Glu	Glu	Leu	Val	Ala	Ala	Val	Glu	Asp	
																65
																70
																75
																80

85	90	95
Val Arg Lys Gln Gly Asp Leu Met	Lys Ala Ala Ala	Gly Glu Phe Ala
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Asp Asp Pro Cys Ser Ser Val	Lys Arg Gly Asn Met Val	Arg Ala Ala
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Arg Ala Leu Leu Ser Ala Val	Thr Arg Leu Leu Ile	Leu Ala Asp Met
130	135	140
Ala Asp Val Tyr Lys Leu Leu Val	Gln Leu Lys Val Val	Glu Asp Gly
145	150	155
Ile Leu Lys Leu Arg Asn Ala	Gly Asn Glu Gln Asp	Leu Gly Ile Gln
165	170	175
Tyr Lys Ala Leu Lys Pro Glu Val	Asp Lys Leu Asn Ile	Met Ala Ala
180	185	190
Lys Arg Gln Gln Glu Leu Lys Asp Val	Gly His Arg Asp Gln	Met Ala
195	200	205
Ala Ala Arg Gly Ile Leu Gln Lys Asn Val	Pro Ile Leu Tyr Thr	Ala
210	215	220
Ser Gln Ala Cys Leu Gln His Pro Asp Val	Ala Ala Tyr Lys	Ala Asn
225	230	235
Arg Asp Leu Ile Tyr Lys Gln Leu Gln	Ala Val Thr Gly	Ile Ser
245	250	255
Asn Ala Ala Gln Ala Thr Ala Ser Asp Asp	Ala Ser Gln His Gln Gly	
260	265	270
Gly Gly Gly Glu Leu Ala Tyr Ala Leu Asn	Asp Phe Asp Lys Gln	
275	280	285
Ile Ile Val Asp Pro Leu Ser Phe Ser	Glu Glu Arg Phe Arg	Pro Ser
290	295	300
Leu Glu Glu Arg Leu Glu Ser Ile Ile Ser	Gly Ala Ala Leu	Met Ala
305	310	315
Asp Ser Ser Cys Thr Arg Asp Asp Arg Arg	Glu Arg Ile Val	Ala Glu
325	330	335
Cys Asn Ala Val Arg Gln Ala Leu Gln Asp	Leu Leu Ser Glu	Tyr Met
340	345	350
Gly Asn Ala Gly Arg Lys Glu Arg Ser Asp	Ala Leu Asn Ser	Ala Ile
355	360	365
Asp Lys Met Thr Lys Thr Arg Asp Leu Arg	Arg Gln Leu Arg Lys	
370	375	380
Ala Val Met Asp His Val Ser Asp Ser Phe	Leu Glu Thr Asn Val	Pro
385	390	395
Leu Leu Val Leu Ile Glu Ala Ala Lys	Asn Gly Asn Glu Lys	Glu Val
405	410	415
Lys Glu Tyr Ala Gln Val Phe Arg Glu His	Ala Asn Lys Leu Ile	Glu
420	425	430
Val Ala Asn Leu Ala Cys Ser Ile Ser Asn	Asn Glu Glu Gly	Val Lys
435	440	445
Leu Val Arg Met Ser Ala Ser Gln Leu Glu	Ala Leu Cys Pro Gln	Val
450	455	460
Ile Asn Ala Ala Leu Ala Leu Ala Lys	Pro Gln Ser Lys	Leu Ala
465	470	475
Gln Glu Asn Met Asp Leu Phe Lys Glu Gln	Trp Glu Lys Gln Val	Arg
485	490	495
Val Leu Thr Asp Ala Val Asp Asp Ile	Thr Ser Ile Asp Asp	Phe Leu
500	505	510
Ala Val Ser Glu Asn His Ile Leu Glu Asp	Val Asn Lys Cys	Val Ile
515	520	525

Ala Leu Gln Glu Lys Asp Val Asp Gly Leu Asp Arg Thr Ala Gly Ala
 530 535 540
 Ile Arg Gly Arg Ala Ala Arg Val Ile His Val Val Thr Ser Glu Met
 545 550 555 560
 Asp Asn Tyr Glu Pro Gly Val Tyr Thr Glu Lys Val Leu Glu Ala Thr
 565 570 575
 Lys Leu Leu Ser Asn Thr Val Met Pro Arg Phe Thr Glu Gln Val Glu
 580 585 590
 Ala Ala Val Glu Ala Leu Ser Ser Asp Pro Ala Gln Pro Met Asp Glu
 595 600 605
 Asn Glu Phe Ile Asp Ala Ser Arg Leu Val Tyr Asp Gly Ile Arg Asp
 610 615 620
 Ile Arg Lys Ala Val Leu Met Ile Arg Thr Pro Glu Glu Leu Asp Asp
 625 630 635 640
 Ser Asp Phe Glu Thr Glu Asp Phe Asp Val Arg Ser Arg Thr Ser Val
 645 650 655
 Gln Thr Glu Asp Asp Gln Leu Ile Ala Gly Gln Ser Ala Arg Ala Ile
 660 665 670
 Met Ala Gln Leu Pro Gln Glu Gln Lys Ala Lys Ile Ala Glu Gln Val
 675 680 685
 Ala Ser Phe Gln Glu Glu Lys Ser Lys Leu Asp Ala Glu Val Ser Lys
 690 695 700
 Trp Asp Asp Ser Gly Asn Asp Ile Ile Val Leu Ala Lys Gln Met Cys
 705 710 715 720
 Met Ile Met Met Glu Met Thr Asp Phe Thr Arg Gly Lys Gly Pro Leu
 725 730 735
 Lys Asn Thr Ser Asp Val Ile Ser Ala Ala Lys Lys Ile Ala Glu Ala
 740 745 750
 Gly Ser Arg Met Asp Lys Leu Gly Arg Thr Ile Ala Asp His Cys Pro
 755 760 765
 Asp Ser Ala Cys Lys Gln Asp Leu Leu Ala Tyr Leu Gln Arg Ile Ala
 770 775 780
 Leu Tyr Cys His Gln Leu Asn Ile Cys Ser Lys Val Lys Ala Glu Val
 785 790 795 800
 Gln Asn Leu Gly Gly Glu Leu Val Val Ser Gly Val Asp Ser Ala Met
 805 810 815
 Ser Leu Ile Gln Ala Ala Lys Asn Leu Met Asn Ala Val Val Gln Thr
 820 825 830
 Val Lys Ala Ser Tyr Val Ala Ser Thr Lys Tyr Gln Lys Ser Gln Gly
 835 840 845
 Met Ala Ser Leu Asn Leu Pro Ala Val Ser Trp Lys Met Lys Ala Pro
 850 855 860
 Glu Lys Lys Pro Leu Val Lys Arg Glu Lys Gln Asp Glu Thr Gln Thr
 865 870 875 880
 Lys Ile Lys Arg Ala Ser Gln Lys Lys His Val Asn Pro Val Gln Ala
 885 890 895
 Leu Ser Glu Phe Lys Ala Met Asp Ser Ile
 900 905

<210> 115
 <211> 1701
 <212> DNA
 <213> Homo Sapiens

<400> 115

cggccggccg ccatggctaa cgtggctgac acgaagctgt acgacatcct gggcgccc	60
gcggggcaca gcgagaacga gctgaagaag gcatacagaa agtagccaa ggaatatcat	120
cctgataaga atccccaaat gcaggagaca aactttaaag aaataagttt tgcatatgaa	180
gtactatcaa atcctgagaa gcgtgagtt tatgacagat acggagagca aggtcttcgg	240
gaaggcagcg gcggaggtgg gtggcatgga ttgatattt ctctcacgt ttttgggg	300
ggattgttcg gcttcatggg caatcagagt agaagtcgaa atggcagaag aagaggagag	360
gacatgatgc atccactcaa agtatctta gaagatctgt ataatggcaa gacaaccaa	420
ctacaactta gcaagaatgt gctctgttagt gcatgcagt gccaaggcgg aaagtctgga	480
gctgtccaaa agtgttagtgc ttgtcgaggt cgaggtgtgc gcatcatgat cagacagctg	540
gctccaggga tggtaacaaca gatgcagtct gtgtgctctg attgtaatgg tgaaggagag	600
gtaattaatg aaaaagaccg ctgtaaaaaaaaa tgtgaaggga agaaggtgat taaagaagtc	660
aagattcttg aagtccacgt agacaaaaggc atgaaacatg gacagagaat tacattcact	720
gggaaagcag accaggcccc agagtgAAC ccggagacat tttttttt gctaccagga	780
gaaaagaaca tggaggtatt tcagagagat gggaatgatt tgcacatgac atataaaaata	840
ggacttggta aagctctatg tggatttcag ttcacattaa gccacatttga tggacgtcag	900
attgtgtga aataaaaaaaa tggcaaagta attgaaccag ggtgtttcg ttagtttcga	960
ggtgaaggga tgccgcagta tcgtaatccc tttggaaaaag gtgggcttta cataaagttt	1020
gatgtgcagt ttccctgaaaaa caactggatc aacccagaca agctttctga actagaagat	1080
cttctgccat cttagaccgg a gttccctaac ataattggag aaacagagga ggttagagctt	1140
caggaatttg atagcactcg aggctcagga ggtggcaga ggcgtgaagc ctataatgat	1200
agctctgatg aagaaagcag cagccatcat ggacctggag tgcagtgtgc ccatcagtaa	1260
actctgcaaa caaattgcac aggtggattt tctttccaca tttgcctgtat ttgttctcag	1320
caatccagct ggagtgtctt atcaatccag atgaactgag ggacatctgt tggctatgt	1380
ataactttta aaatttggat agtatacata gagtgtataa tttaaaactaa ccacaaagct	1440
ttacatcttc attttgactg ttccatagca gaataaaagca cttgaaagga aacaagactc	1500
cctttcacac atggattatt ataagttca atcctggat ctgtgcttga tttttatcag	1560
ttttgtgttag atttttatgt ttcatatttt aaatttaaat cccacattgt aaagtttgc	1620
caatttgc tgaagctttg tttttggctg cacctgcata agctgctaca aatagaataa	1680
agaatttcat agcctgtaaa a	1701

<210> 116
 <211> 415
 <212> PRT
 <213> Homo Sapiens

<400> 116
 Met Ala Asn Val Ala Asp Thr Lys Leu Tyr Asp Ile Leu Gly Val Pro
 1 5 10 15
 Ala Gly Ala Ser Glu Asn Glu Leu Lys Lys Ala Tyr Arg Lys Leu Ala
 20 25 30
 Lys Glu Tyr His Pro Asp Lys Asn Pro Gln Met Gln Glu Thr Asn Phe
 35 40 45
 Lys Glu Ile Ser Phe Ala Tyr Glu Val Leu Ser Asn Pro Glu Lys Arg
 50 55 60
 Glu Leu Tyr Asp Arg Tyr Gly Glu Gln Gly Leu Arg Glu Gly Ser Gly
 65 70 75 80
 Gly Gly Gly Trp His Gly Leu Ile Phe Ser Leu Thr Val Phe Cys Gly
 85 90 95
 Gly Leu Phe Gly Phe Met Gly Asn Gln Ser Arg Ser Arg Asn Gly Arg
 100 105 110
 Arg Arg Gly Glu Asp Met Met His Pro Leu Lys Val Ser Leu Glu Asp
 115 120 125
 Leu Tyr Asn Gly Lys Thr Thr Lys Leu Gln Leu Ser Lys Asn Val Leu
 130 135 140
 Cys Ser Ala Cys Ser Gly Gln Gly Lys Ser Gly Ala Val Gln Lys

145	150	155	160
Cys Ser Ala Cys Arg Gly Arg Gly Val	Gly Val Arg Ile Met Ile Arg Gln Leu		
165	170	175	
Ala Pro Gly Met Val Gln Gln Met Gln Ser Val Cys Ser Asp Cys Asn			
180	185	190	
Gly Glu Gly Glu Val Ile Asn Glu Lys Asp Arg Cys Lys Lys Cys Glu			
195	200	205	
Gly Lys Lys Val Ile Lys Glu Val Lys Ile Leu Glu Val His Val Asp			
210	215	220	
Lys Gly Met Lys His Gly Gln Arg Ile Thr Phe Thr Gly Glu Ala Asp			
225	230	235	240
Gln Ala Pro Glu Trp Asn Pro Glu Thr Leu Phe Phe Leu Leu Pro Gly			
245	250	255	
Glu Lys Asn Met Glu Val Phe Gln Arg Asp Gly Asn Asp Leu His Met			
260	265	270	
Thr Tyr Lys Ile Gly Leu Val Glu Ala Leu Cys Gly Phe Gln Phe Thr			
275	280	285	
Leu Ser His Leu Asp Gly Arg Gln Ile Val Val Lys Tyr Pro Pro Gly			
290	295	300	
Lys Val Ile Glu Pro Gly Cys Val Arg Val Val Arg Gly Glu Gly Met			
305	310	315	320
Pro Gln Tyr Arg Asn Pro Phe Glu Lys Gly Gly Leu Tyr Ile Lys Phe			
325	330	335	
Asp Val Gln Phe Pro Glu Asn Asn Trp Ile Asn Pro Asp Lys Leu Ser			
340	345	350	
Glu Leu Glu Asp Leu Leu Pro Ser Arg Pro Glu Val Pro Asn Ile Ile			
355	360	365	
Gly Glu Thr Glu Glu Val Glu Leu Gln Glu Phe Asp Ser Thr Arg Gly			
370	375	380	
Ser Gly Gly Gly Gln Arg Arg Glu Ala Tyr Asn Asp Ser Ser Asp Glu			
385	390	395	400
Glu Ser Ser Ser His His Gly Pro Gly Val Gln Cys Ala His Gln			
405	410	415	

<210> 117
<211> 1821
<212> DNA
<213> Homo Sapiens

<400> 117		
cgcgtgaact gcttcctgca ggctggccat ggcgcttcac gttcccaagg ctccgggctt	60	
tgcccagatg ctcaaggagg gagcggaaaca cttttcagga ttagaagagg ctgtgtatag	120	
aaacatacaa gcttgcaagg agcttgccca aaccacttgt acagcatatg gacaaaagg	180	
aatgaacaaa atggtttatca accacttgga gaagttgtt gtgacaaacg atgcagcaac	240	
tatTTtaaga gaactagaag tacagcatcc tgctgcaaaa atgattgtaa tggcttctca	300	
tatgcaagag caagaagttg gagatggcac aaactttgtt ctggatattt ctggagctct	360	
cctggaaatta gctgaagaac ttctgaggat tggcctgtca gtttcagagg tcataagaagg	420	
ttatgaaata gcctgcagaa aagctcatga gattcttct aatttggtat gttgttctgc	480	
aaaaaacctt cgagatattt atgaagtctc atctctactt cgtacctcca taatgagtaa	540	
acaatatgtt aatgaagtat ttctggccaa gcttattgtt cagggatgcg tatctatTTT	600	
tcctgattcc ggccatttca atgttgataa catcagagtt tgtaaaattc tgggctctgg	660	
tatcagttcc tcttcagttat tgcatggcat ggttttaag aaggaaacccg aaggtgatgt	720	
aacatctgtc aaagatgcaa aaatagcagt gtactctgt cctttgatg gcatgataac	780	
agaaaactaag ggaacagtgt tgataaagac tgctgaagaa ttgatgaatt ttagtaaggg	840	
agaagaaaac ctcatggatg cacaagtcaa agctattgtt gatactggcg caaatgtcg	900	

agtaaacaggt ggcaaagtgg cagacatggc tcttcattat gcaaataaat ataatatcat 960
 gtttagtgagg ctaaactcaa aatgggatct ccgaagactt tgtaaaaactg ttgggtgtac 1020
 agctcttcct agattgacac ctccctgcct tgaagaaatg ggacactgtg acagtgtta 1080
 cctctcagaa gtggagata ctcaggtggt gtttttaag catgaaaagg aagatggcgc 1140
 catttctacc atagtacttc gaggctctac agacaatctg atggatgaca tagaaagggt 1200
 agtagacgat ggtgttaata cttaaactg tcttacaagg gataaaacgtc ttgtacccgg 1260
 aggtggagca acagaaattg aattagccaa acagatcaca tcatatggag agacatgtcc 1320
 tggacttgaa cagtatgcta ttaagaagtt tgctgaggca tttgaagcta ttccccgcgc 1380
 actggcagaa aactctggag ttaaggccaa tgaagtaatc tctaaacttt atgcagttaca 1440
 tcaagaagga aataaaaacg ttggattaga tattgaggct gaagtcctg ctgtaaagga 1500
 catgctggaa gctggatttc tagatactt cctggggaaa tattgggcta tcaaactcgc 1560
 tactaatgct gcagtcactg tacttaggt ggatcagatc atcatggcaa aaccagctgg 1620
 tggggccaag cctccaagtg ggaagaaaaga ctggatgat gaccaaataatg attgaaattg 1680
 gcttaattt tactgttaggt gaaggctgta tttgttagtag tactcaagaa tcacctgatg 1740
 ttttcttatt ctccctaaat taagagttat tttgtgtttg tattcttggc tggatgttat 1800
 aataaacata ttgttactgt c 1821

<210> 118
 <211> 548
 <212> PRT
 <213> Homo Sapiens

<400> 118
 Met Ala Leu His Val Pro Lys Ala Pro Gly Phe Ala Gln Met Leu Lys
 1 5 10 15
 Glu Gly Ala Lys His Phe Ser Gly Leu Glu Glu Ala Val Tyr Arg Asn
 20 25 30
 Ile Gln Ala Cys Lys Glu Leu Ala Gln Thr Thr Arg Thr Ala Tyr Gly
 35 40 45
 Pro Lys Gly Met Asn Lys Met Val Ile Asn His Leu Glu Lys Leu Phe
 50 55 60
 Val Thr Asn Asp Ala Ala Thr Ile Leu Arg Glu Leu Glu Val Gln His
 65 70 75 80
 Pro Ala Ala Lys Met Ile Val Met Ala Ser His Met Gln Glu Gln Glu
 85 90 95
 Val Gly Asp Gly Thr Asn Phe Val Leu Val Phe Ala Gly Ala Leu Leu
 100 105 110
 Glu Leu Ala Glu Glu Leu Leu Arg Ile Gly Leu Ser Val Ser Glu Val
 115 120 125
 Ile Glu Gly Tyr Glu Ile Ala Cys Arg Lys Ala His Glu Ile Leu Pro
 130 135 140
 Asn Leu Val Cys Cys Ser Ala Lys Asn Leu Arg Asp Ile Asp Glu Val
 145 150 155 160
 Ser Ser Leu Leu Arg Thr Ser Ile Met Ser Lys Gln Tyr Gly Asn Glu
 165 170 175
 Val Phe Leu Ala Lys Leu Ile Ala Gln Ala Cys Val Ser Ile Phe Pro
 180 185 190
 Asp Ser Gly His Phe Asn Val Asp Asn Ile Arg Val Cys Lys Ile Leu
 195 200 205
 Gly Ser Gly Ile Ser Ser Ser Val Leu His Gly Met Val Phe Lys
 210 215 220
 Lys Glu Thr Glu Gly Asp Val Thr Ser Val Lys Asp Ala Lys Ile Ala
 225 230 235 240
 Val Tyr Ser Cys Pro Phe Asp Gly Met Ile Thr Glu Thr Lys Gly Thr
 245 250 255

Val Leu Ile Lys Thr Ala Glu Glu Leu Met Asn Phe Ser Lys Gly Glu
 260 265 270
 Glu Asn Leu Met Asp Ala Gln Val Lys Ala Ile Ala Asp Thr Gly Ala
 275 280 285
 Asn Val Val Val Thr Gly Gly Lys Val Ala Asp Met Ala Leu His Tyr
 290 295 300
 Ala Asn Lys Tyr Asn Ile Met Leu Val Arg Leu Asn Ser Lys Trp Asp
 305 310 315 320
 Leu Arg Arg Leu Cys Lys Thr Val Gly Ala Thr Ala Leu Pro Arg Leu
 325 330 335
 Thr Pro Pro Val Leu Glu Glu Met Gly His Cys Asp Ser Val Tyr Leu
 340 345 350
 Ser Glu Val Gly Asp Thr Gln Val Val Val Phe Lys His Glu Lys Glu
 355 360 365
 Asp Gly Ala Ile Ser Thr Ile Val Leu Arg Gly Ser Thr Asp Asn Leu
 370 375 380
 Met Asp Asp Ile Glu Arg Val Val Asp Asp Gly Val Asn Thr Phe Lys
 385 390 395 400
 Val Leu Thr Arg Asp Lys Arg Leu Val Pro Gly Gly Ala Thr Glu
 405 410 415
 Ile Glu Leu Ala Lys Gln Ile Thr Ser Tyr Gly Glu Thr Cys Pro Gly
 420 425 430
 Leu Glu Gln Tyr Ala Ile Lys Lys Phe Ala Glu Ala Phe Glu Ala Ile
 435 440 445
 Pro Arg Ala Leu Ala Glu Asn Ser Gly Val Lys Ala Asn Glu Val Ile
 450 455 460
 Ser Lys Leu Tyr Ala Val His Gln Glu Gly Asn Lys Asn Val Gly Leu
 465 470 475 480
 Asp Ile Glu Ala Glu Val Pro Ala Val Lys Asp Met Leu Glu Ala Gly
 485 490 495
 Ile Leu Asp Thr Tyr Leu Gly Lys Tyr Trp Ala Ile Lys Leu Ala Thr
 500 505 510
 Asn Ala Ala Val Thr Val Leu Arg Val Asp Gln Ile Ile Met Ala Lys
 515 520 525
 Pro Ala Gly Gly Pro Lys Pro Pro Ser Gly Lys Lys Asp Trp Asp Asp
 530 535 540
 Asp Gln Asn Asp
 545

<210> 119
 <211> 1321
 <212> DNA
 <213> Homo Sapiens

<400> 119
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 ctggtagaca gttactggac gaagtagaag tggcgactga acccgccggt tcccgatag 120
 tccaggagaa ggtgttcaag ggcttggacc tccttgagaa ggctgccgaa atgttatcgc 180
 agctcgactt gttcagccga aatgaagatt tggaaagagat tgcttccacc gacctgaagt 240
 accttttgtt gccagcggtt caaggagccc tcaccatgaa acaagtcaac cccagcaagc 300
 gtctagatca tttgcagcgg gctcgagaac actttataaa ctacttaact cagtgccatt 360
 gctatcatgt ggcagagttt gagctgccc aaaccatgaa caactctgct gaaaatcaca 420
 ctgccaattc ctccatggct tatcctagtc tcgttgctat ggcatctcaa agacaggcta 480
 aaatacagag atacaagcag aagaaggagt tggagcatag gttgtctgca atgaaatctg 540
 ctgtggaaag tggtaagca gatgtatgagc gtgttcgtga atattatctt cttcaccc 600

agaggtggat tgatatcagc ttagaagaga ttgagagcat tgaccaggaa ataaagatcc 660
 tgagagaaaag agactcttca agagaggcat caacttctaa ctcatctgc caggagaggc 720
 ctccagtcaa acccttcatt ctcactcgga acatggctca agccaaagta tttggagctg 780
 gttatccaag tctgccaact atgacggtga gtgactggta tgagcaacat cgaaatatg 840
 gagcattacc ggatcaggaa atagccaagg cagcaccaga ggaattcaga aaagcagctc 900
 agcaacagga agaacaagaa gaaaaggagg aagaggatga tgaacaaaca ctccacagag 960
 cccgggagtg ggatgactgg aaggacaccc atcctagggg ctagggAAC cgacagaaca 1020
 tgggctgtac ttcccacaac accacaggac tgcagggTC acaactccct gccaaggaaa 1080
 accatgcagt cctccccCTCC ctggTCTCCT gcttcagctc tgtacaacga gggcaaagat 1140
 gctaaatctt gctttgcatt cagtaaagtg tcaagtgatt aagtgtgtat ttgtacccta 1200
 gatgatatga accagcagtc ttgtttggc atcatcctca tcatagttgta ttccagcttc 1260
 ttaagtggaa ggaaaagagt gctgagaaat ggctctgtat aatctatggc tatccgaatt 1320
 C 1321

<210> 120
 <211> 339
 <212> PRT
 <213> Homo Sapiens

<400> 120
 Met Ala Ala Glu Asp Glu Leu Gln Leu Pro Arg Leu Pro Glu Leu Phe
 1 5 10 15
 Glu Thr Gly Arg Gln Leu Leu Asp Glu Val Glu Val Ala Thr Glu Pro
 20 25 30
 Ala Gly Ser Arg Ile Val Gln Glu Lys Val Phe Lys Gly Leu Asp Leu
 35 40 45
 Leu Glu Lys Ala Ala Glu Met Leu Ser Gln Leu Asp Leu Phe Ser Arg
 50 55 60
 Asn Glu Asp Leu Glu Glu Ile Ala Ser Thr Asp Leu Lys Tyr Leu Leu
 65 70 75 80
 Val Pro Ala Phe Gln Gly Ala Leu Thr Met Lys Gln Val Asn Pro Ser
 85 90 95
 Lys Arg Leu Asp His Leu Gln Arg Ala Arg Glu His Phe Ile Asn Tyr
 100 105 110
 Leu Thr Gln Cys His Cys Tyr His Val Ala Glu Phe Glu Leu Pro Lys
 115 120 125
 Thr Met Asn Asn Ser Ala Glu Asn His Thr Ala Asn Ser Ser Met Ala
 130 135 140
 Tyr Pro Ser Leu Val Ala Met Ala Ser Gln Arg Gln Ala Lys Ile Gln
 145 150 155 160
 Arg Tyr Lys Gln Lys Lys Glu Leu Glu His Arg Leu Ser Ala Met Lys
 165 170 175
 Ser Ala Val Glu Ser Gly Gln Ala Asp Asp Glu Arg Val Arg Glu Tyr
 180 185 190
 Tyr Leu Leu His Leu Gln Arg Trp Ile Asp Ile Ser Leu Glu Glu Ile
 195 200 205
 Glu Ser Ile Asp Gln Glu Ile Lys Ile Leu Arg Glu Arg Asp Ser Ser
 210 215 220
 Arg Glu Ala Ser Thr Ser Asn Ser Ser Arg Gln Glu Arg Pro Pro Val
 225 230 235 240
 Lys Pro Phe Ile Leu Thr Arg Asn Met Ala Gln Ala Lys Val Phe Gly
 245 250 255
 Ala Gly Tyr Pro Ser Leu Pro Thr Met Thr Val Ser Asp Trp Tyr Glu
 260 265 270
 Gln His Arg Lys Tyr Gly Ala Leu Pro Asp Gln Gly Ile Ala Lys Ala

275	280	285
Ala Pro Glu Glu Phe Arg Lys Ala	Ala Gln Gln Glu Glu Gln Glu	
290	295	300
Glu Lys Glu Glu Glu Asp Asp Glu	Gln Thr Leu His Arg Ala Arg	Glu
305	310	315
Trp Asp Asp Trp Lys Asp Thr His	Pro Arg Gly Tyr Gly Asn Arg	Gln
	325	330
Asn Met Gly		

<210> 121
<211> 2965
<212> DNA
<213> Homo Sapiens

<400> 121	60
gcggaggctcg gcggtcgggt ccgtctctgc ccgcggctgt ggccggcgccg gccggatccag	120
ccttagcgtt cctctctggg cggcggcgcc ggccggctgg ttgacgcctc ctccgccagc	180
tgagcccccg ggagcccagg acgccccttc cccgcccattt cccgctcccc gaggccggcc	240
gcctggtcat ggcgcagccg ggcccggtt cccagcctga cgtttctttt cagcaacggg	300
tagcagaatt gaaaaaaatt aatgcagaat tttacgtgc acaacagcag cttgaacaag	360
aatttaatca aaagagagca aaatttaagg agtttatattt ggctaaagag gaggatctga	420
agaggcaaaa tgcatgtatta caagctgcac aagatgattt gggacacctt cgaacccagc	480
tgtgggaagc tcaagcagag atggagaata ttaaggcgat tgccacagtc tctgagaaca	540
ccaagcaaga agctatagat gaagtaaaaa gacagtggag agaagaagtt gcttcacttc	600
aggctgttat gaaagaaaaca gttcgtgact atgagcacca gttcacctt aggctggagc	660
aggagcgaac acagtggca cagtatagag aatacgcaga gagggaaata gctgatttaa	720
gaagaaggct gtctgaaggt caagaggagg aaaatttaga aaatgaaatg aaaaaggccc	780
aagaggatgc tgagaaaactt cggccgttg tgatgcattt ggaaaaggaa attgcagtt	840
tgaaggataa actgacagag gctgaagaca aaattaaaga gctggaggcc tcaaaggta	900
aagaactgaa tcattatctg gaagctgaga aatctttagt gactgatcta gagatgtatg	960
tagctgttt gaatactcag aaatctgttc tacaggaaga tgctgagaaa ctgcggaaag	1020
aattgcattt agtttgccat ctcttgagc aagagcgaca acaacacaac cagttaaaac	1080
atacgtggca gaaggccaat gaccagttt tggaaatctca gcgttactt atgagagaca	1140
tgcagcgaat ggagattgtt ctaacctcag aacagctccg acaagttgaa gaactgaaga	1200
agaaagatca ggaggatgtt gaacaacaaa gactcaataa gagaaggat cacaaaaaag	1260
cagatgtga ggaagaaaata aaaataccag tagtgtgtgc tttaactcaa gaagaatctt	1320
cagcccgatt atcaaatttggaa gaggaggatt tagacagcac ccgtggctca gttcattcct	1380
tagatgcagg cttgctgtt ccattctggag atcctttcag taaatcggac aatgacatgt	1440
ttaaagatgg actcaggaga gcacagtcta cagacagctt gggAACCTCG ggctcattgc	1500
aatccaaagc tttaggctat aactacaaag caaaatctgc tggaaacacctg gacgagtcag	1560
attttggacc actggtagga gcagattcag tgtctgagaa ctttgatact gcatcccttg	1620
ggtcactcca gatgccaagt gggtttatgt taaccaaaga tcaggaaaga gcaatcaagg	1680
cgatgacacc agaacaagaa gagacagcgt ccctcctctc cagcgattacc cagggcatgg	1740
agagtgccta tggccctt agtggttatc gtttagttt tgaaacagaa tggaaatctct	1800
tgcagaaaga ggtacataat gctggaaata aacttggtag acgttgcgtt atgtgttcca	1860
attacgaaaa acagttacaa ggaattcaga ttcaggaggc tggaaacgaga gaccagggtga	1920
aaaaactaca gctgatgcta aggcaagcta atgaccagtt agagaagaca atgaaagata	1980
agcaggagct ggaagacttc ataaagcaaa gcagcgaaga ttcgagtcac cagatctctg	2040
cactcgctt aagagcccaag gcctccgaga tcttacttga agagttacag cagggcttt	2100
cccaggcaaa gagggatgtt caggaacaga tggccgtgtt gatgcgtca cgggaacagg	2160
tttcagaaga gctgggtgagg ttacagaaag ataatgacag tctccaggaa aagcacagcc	2220
tgcatgtgtc attacagcaa gcagaagact tcatcctccc agacactaca gaggcactgc	2280
gggagttgggt attaaaatac cgtgaggaca tcatatgt gcgacagca gcagaccacg	2340
tagaagaaaa gctgaaggct gagatactt tcctaaaaga gcagatccaa gcagaacagt	

gtttaaaaga aaatcttcaa gaaactctgc aactagaaaat agaaaaactgc aaggaggaaa	2400
tagcttctat ttcttagccca aaagctgaat tagaaagaat aaaagtggaa aaaggacagt	2460
tggagtcac attaagagag aagtctcaac agcttgagag tcttcaggaa ataaaagatca	2520
gtttgaaaga gcagttaaag aaagagactg ctgctaaggc taccgttgaa cagctaattgt	2580
ttgaagagaa gaacaaagct cagagattac agacagaatt agatgtcagt gagcaagtcc	2640
agagagattt tgtaaagctt tcacagaccc ttcaggtgca gtttagagcgg atccggcaag	2700
ctgactccctt ggagagaatc cggccaattc tgaatgatac taaactgaca gacattaacc	2760
agcttcctga gacatgacac cctcatggca ggattcttagc ctgcactttg gtttttaac	2820
tcatcttag agcaacagta attattattt aactcttaac tgaagaaaaga gaagtcacaa	2880
caaaggaaag actggagaaa tgcttacttc tagagggaga agactgtgcg gcacaggaaa	2940
cagcaaacag tgggtgatc tgcag	2965

<210> 122
<211> 862
<212> PRT
<213> Homo Sapiens

<400> 122			
Met Ala Gln Pro Gly Pro Ala Ser Gln Pro Asp Val Ser Leu Gln Gln			
1	5	10	15
Arg Val Ala Glu Leu Glu Lys Ile Asn Ala Glu Phe Leu Arg Ala Gln			
20	25	30	
Gln Gln Leu Glu Gln Glu Phe Asn Gln Lys Arg Ala Lys Phe Lys Glu			
35	40	45	
Leu Tyr Leu Ala Lys Glu Glu Asp Leu Lys Arg Gln Asn Ala Val Leu			
50	55	60	
Gln Ala Ala Gln Asp Asp Leu Gly His Leu Arg Thr Gln Leu Trp Glu			
65	70	75	80
Ala Gln Ala Glu Met Glu Asn Ile Lys Ala Ile Ala Thr Val Ser Glu			
85	90	95	
Asn Thr Lys Gln Glu Ala Ile Asp Glu Val Lys Arg Gln Trp Arg Glu			
100	105	110	
Glu Val Ala Ser Leu Gln Ala Val Met Lys Glu Thr Val Arg Asp Tyr			
115	120	125	
Glu His Gln Phe His Leu Arg Leu Glu Gln Glu Arg Thr Gln Trp Ala			
130	135	140	
Gln Tyr Arg Glu Tyr Ala Glu Arg Glu Ile Ala Asp Leu Arg Arg Arg			
145	150	155	160
Leu Ser Glu Gly Gln Glu Glu Glu Asn Leu Glu Asn Glu Met Lys Lys			
165	170	175	
Ala Gln Glu Asp Ala Glu Lys Leu Arg Ser Val Val Met Pro Met Glu			
180	185	190	
Lys Glu Ile Ala Ala Leu Lys Asp Lys Leu Thr Glu Ala Glu Asp Lys			
195	200	205	
Ile Lys Glu Leu Glu Ala Ser Lys Val Lys Glu Leu Asn His Tyr Leu			
210	215	220	
Glu Ala Glu Lys Ser Cys Arg Thr Asp Leu Glu Met Tyr Val Ala Val			
225	230	235	240
Leu Asn Thr Gln Lys Ser Val Leu Gln Glu Asp Ala Glu Lys Leu Arg			
245	250	255	
Lys Glu Leu His Glu Val Cys His Leu Leu Glu Gln Glu Arg Gln Gln			
260	265	270	
His Asn Gln Leu Lys His Thr Trp Gln Lys Ala Asn Asp Gln Phe Leu			
275	280	285	
Glu Ser Gln Arg Leu Leu Met Arg Asp Met Gln Arg Met Glu Ile Val			

290	295	300
Leu Thr Ser Glu Gln Leu Arg Gln Val Glu Glu Leu Lys Lys Lys Asp		
305	310	315
Gln Glu Asp Asp Glu Gln Gln Arg Leu Asn Lys Arg Lys Asp His Lys		320
325	330	335
Lys Ala Asp Val Glu Glu Ile Lys Ile Pro Val Val Cys Ala Leu		
340	345	350
Thr Gln Glu Glu Ser Ser Ala Gln Leu Ser Asn Glu Glu Glu His Leu		
355	360	365
Asp Ser Thr Arg Gly Ser Val His Ser Leu Asp Ala Gly Leu Leu Leu		
370	375	380
Pro Ser Gly Asp Pro Phe Ser Lys Ser Asp Asn Asp Met Phe Lys Asp		
385	390	395
400		
Gly Leu Arg Arg Ala Gln Ser Thr Asp Ser Leu Gly Thr Ser Gly Ser		
405	410	415
Leu Gln Ser Lys Ala Leu Gly Tyr Asn Tyr Lys Ala Lys Ser Ala Gly		
420	425	430
Asn Leu Asp Glu Ser Asp Phe Gly Pro Leu Val Gly Ala Asp Ser Val		
435	440	445
Ser Glu Asn Phe Asp Thr Ala Ser Leu Gly Ser Leu Gln Met Pro Ser		
450	455	460
Gly Phe Met Leu Thr Lys Asp Gln Glu Arg Ala Ile Lys Ala Met Thr		
465	470	475
480		
Pro Glu Gln Glu Glu Thr Ala Ser Leu Leu Ser Ser Val Thr Gln Gly		
485	490	495
Met Glu Ser Ala Tyr Val Ser Pro Ser Gly Tyr Arg Leu Val Ser Glu		
500	505	510
Thr Glu Trp Asn Leu Leu Gln Lys Glu Val His Asn Ala Gly Asn Lys		
515	520	525
Leu Gly Arg Arg Cys Asp Met Cys Ser Asn Tyr Glu Lys Gln Leu Gln		
530	535	540
Gly Ile Gln Ile Gln Glu Ala Glu Thr Arg Asp Gln Val Lys Lys Leu		
545	550	555
560		
Gln Leu Met Leu Arg Gln Ala Asn Asp Gln Leu Glu Lys Thr Met Lys		
565	570	575
Asp Lys Gln Glu Leu Glu Asp Phe Ile Lys Gln Ser Ser Glu Asp Ser		
580	585	590
Ser His Gln Ile Ser Ala Leu Val Leu Arg Ala Gln Ala Ser Glu Ile		
595	600	605
Leu Leu Glu Glu Leu Gln Gln Gly Leu Ser Gln Ala Lys Arg Asp Val		
610	615	620
Gln Glu Gln Met Ala Val Leu Met Gln Ser Arg Glu Gln Val Ser Glu		
625	630	635
640		
Glu Leu Val Arg Leu Gln Lys Asp Asn Asp Ser Leu Gln Gly Lys His		
645	650	655
Ser Leu His Val Ser Leu Gln Gln Ala Glu Asp Phe Ile Leu Pro Asp		
660	665	670
Thr Thr Glu Ala Leu Arg Glu Leu Val Leu Lys Tyr Arg Glu Asp Ile		
675	680	685
Ile Asn Val Arg Thr Ala Ala Asp His Val Glu Glu Lys Leu Lys Ala		
690	695	700
Glu Ile Leu Phe Leu Lys Glu Gln Ile Gln Ala Glu Gln Cys Leu Lys		
705	710	715
720		
Glu Asn Leu Glu Glu Thr Leu Gln Leu Glu Ile Glu Asn Cys Lys Glu		
725	730	735

Glu Ile Ala Ser Ile Ser Ser Leu Lys Ala Glu Leu Glu Arg Ile Lys
 740 745 750
 Val Glu Lys Gly Gln Leu Glu Ser Thr Leu Arg Glu Lys Ser Gln Gln
 755 760 765
 Leu Glu Ser Leu Gln Glu Ile Lys Ile Ser Leu Glu Glu Gln Leu Lys
 770 775 780
 Lys Glu Thr Ala Ala Lys Ala Thr Val Glu Gln Leu Met Phe Glu Glu
 785 790 795 800
 Lys Asn Lys Ala Gln Arg Leu Gln Thr Glu Leu Asp Val Ser Glu Gln
 805 810 815
 Val Gln Arg Asp Phe Val Lys Leu Ser Gln Thr Leu Gln Val Gln Leu
 820 825 830
 Glu Arg Ile Arg Gln Ala Asp Ser Leu Glu Arg Ile Arg Ala Ile Leu
 835 840 845
 Asn Asp Thr Lys Leu Thr Asp Ile Asn Gln Leu Pro Glu Thr
 850 855 860

<210> 123
 <211> 544
 <212> DNA
 <213> Homo Sapiens

<400> 123

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 ttttaaggga agacaggatt caacttggaa aacctccata tacagatgaa aataaaaaaag 120
 ttgggttggc attaaaggac cttgctaagc agtactctga cagactagaa tgctgtgaaa 180
 atgaagttaga aaaggtata gaagaaatac gttgcaaggc aattgagcgt ggaacaggaa 240
 atgacaatta tagaacaacg ggaattgcta caatcgaggt gttttacca ccaagactaa 300
 aaaaagatag gaaaaacttg ttggagaccc gattgcacat cactggcaga gaactgaggt 360
 caaaaatagc tggaaacctt ggacttcaag aanattatat caaaattgtc ataaataaga 420
 agcaactacn actagggaaa acccttgaag ancaaggcgt ggctcacaat gtgaaagcga 480
 tggtgcttga actaaaacaa tctgaagagg acgcgaggaa aaacttccag ttagaggaag 540
 agga 544

<210> 124
 <211> 178
 <212> PRT
 <213> Homo Sapiens

<400> 124

Glu Trp Arg Gly Ala Gly Met Ala Gln Lys Lys Tyr Leu Gln Ala Lys
 1 5 10 15
 Leu Thr Gln Phe Leu Arg Glu Asp Arg Ile Gln Leu Trp Lys Pro Pro
 20 25 30
 Tyr Thr Asp Glu Asn Lys Lys Val Gly Leu Ala Leu Lys Asp Leu Ala
 35 40 45
 Lys Gln Tyr Ser Asp Arg Leu Glu Cys Cys Glu Asn Glu Val Glu Lys
 50 55 60
 Val Ile Glu Glu Ile Arg Cys Lys Ala Ile Glu Arg Gly Thr Gly Asn
 65 70 75 80
 Asp Asn Tyr Arg Thr Thr Gly Ile Ala Thr Ile Glu Val Phe Leu Pro
 85 90 95
 Pro Arg Leu Lys Lys Asp Arg Lys Asn Leu Leu Glu Thr Arg Leu His
 100 105 110
 Ile Thr Gly Arg Glu Leu Arg Ser Lys Ile Ala Glu Thr Phe Gly Leu

115	120	125
Gln Glu Tyr Ile Lys Ile Val Ile Asn Lys Lys Gln Leu Leu Gly Lys		
130	135	140
Thr Leu Glu Gln Gly Val Ala His Asn Val Lys Ala Met Val Leu Glu		
145	150	155
Leu Lys Gln Ser Glu Glu Asp Ala Arg Lys Asn Phe Gln Leu Glu Glu		
165	170	175
Glu Glu		

<210> 125
<211> 1302
<212> DNA
<213> Homo Sapiens

<400> 125	60
atggaggtgg tggaccgcga gcagctgggc atgttacggc agggcgagct gatgtcggtg	120
ggtatggaca cgttcatcca ccgcacatcgac tccaccggagg tcatactacca gcccgcggc	180
aagcggggca agctcatcgga caagtacctg atgggggacc tgctggggga aggctttac	240
ggcaaggtga aggagggtgc ggactcggag acgctgtgca ggaggggcgt caagatcc	300
aagaagaaga agttgcgaag gatccccaaac ggggaggcga acgtgaagaa gaaaattcaa	360
ctactgagga ggttacggca caaaaatgtc atccagctgg tggatgtgtt atacaacgaa	420
gagaagcaga aaatgtatat ggtgatggag tactgcgtgt gtggcatgca gaaaatgctg	480
gacagcgtgc cggagaagcg ttcccagtgc tgccaggccc acgggtactt ctgtcagctg	540
attgacggcc tggagtagct gcatagccag ggcattgtgc acaaggacat caagccggg	600
aacctgtgc tcaccacccgg tggcaccctc aaaatctccg acctgggcgt ggccgaggca	660
ctgcaccctgt tcggggcgga cgacacctgc cgaccaggcc agggctcccc ggcttccag	720
ccgccccgaga ttgccaacgg cctggacacc ttctccggct tcaaggtgga catctggtc	780
gctggggtca ccctctacaa catcaccacg ggtctgtacc cttcgaagg ggacaacatc	840
tacaagttgt ttgagaacat cggaaagggg agctacgcca tcccgccgca ctgtggccccc	900
ccgctctctg acctgctgaa agggatgctt gactacgaa cggccaagag gttctccatc	960
cggcagatcc ggcagcacag ctgggtccgg aagaaacatc ctccggctga agcaccagt	1020
cccatcccac cgagccaga caccaaggac cggtgccgca gcatgactgt ggtggcgta	1080
ttggaggacc tgcacggcgc ggacgaggac gaggacctct tcgacatgca ggtacatc	1140
atctacactc aggacttcac ggtgcccggc caggtcccg aagaggaggc cagtcacaat	1200
ggacagcggcc gggccctccc caagggcgtg ttttatgaacg gcacagaggc ggcgcagctg	1260
agcaccaaat ccagggcgga gggccgggccc cccaaaccctg cccgcaaggc ctgctccgccc	1302
agcagcaaga tccgcccgtc gtcggcgtc aagcagcagt ga	

<210> 126
<211> 433
<212> PRT
<213> Homo Sapiens

<400> 126	15	
Met Glu Val Val Asp Pro Gln Gln Leu Gly Met Phe Thr Glu Gly Glu		
1	5	10
Leu Met Ser Val Gly Met Asp Thr Phe Ile His Arg Ile Asp Ser Thr		
20	25	30
Glu Val Ile Tyr Gln Pro Arg Arg Lys Arg Ala Lys Leu Ile Gly Lys		
35	40	45
Tyr Leu Met Gly Asp Leu Leu Gly Glu Gly Ser Tyr Gly Lys Val Lys		
50	55	60
Glu Val Leu Asp Ser Glu Thr Leu Cys Arg Arg Ala Val Lys Ile Leu		
65	70	75
80		

Lys Lys Lys Lys Leu Arg Arg Ile Pro Asn Gly Glu Ala Asn Val Lys
 85 90 95
 Lys Glu Ile Gln Leu Leu Arg Arg Leu Arg His Lys Asn Val Ile Gln
 100 105 110
 Leu Val Asp Val Leu Tyr Asn Glu Glu Lys Gln Lys Met Tyr Met Val
 115 120 125
 Met Glu Tyr Cys Val Cys Gly Met Gln Glu Met Leu Asp Ser Val Pro
 130 135 140
 Glu Lys Arg Phe Pro Val Cys Gln Ala His Gly Tyr Phe Cys Gln Leu
 145 150 155 160
 Ile Asp Gly Leu Glu Tyr Leu His Ser Gln Gly Ile Val His Lys Asp
 165 170 175
 Ile Lys Pro Gly Asn Leu Leu Leu Thr Thr Gly Gly Thr Leu Lys Ile
 180 185 190
 Ser Asp Leu Gly Val Ala Glu Ala Leu His Pro Phe Ala Ala Asp Asp
 195 200 205
 Thr Cys Arg Thr Ser Gln Gly Ser Pro Ala Phe Gln Pro Pro Glu Ile
 210 215 220
 Ala Asn Gly Leu Asp Thr Phe Ser Gly Phe Lys Val Asp Ile Trp Ser
 225 230 235 240
 Ala Gly Val Thr Leu Tyr Asn Ile Thr Thr Gly Leu Tyr Pro Phe Glu
 245 250 255
 Gly Asp Asn Ile Tyr Lys Leu Phe Glu Asn Ile Gly Lys Gly Ser Tyr
 260 265 270
 Ala Ile Pro Gly Asp Cys Gly Pro Pro Leu Ser Asp Leu Leu Lys Gly
 275 280 285
 Met Leu Glu Tyr Glu Pro Ala Lys Arg Phe Ser Ile Arg Gln Ile Arg
 290 295 300
 Gln His Ser Trp Phe Arg Lys Lys His Pro Pro Ala Glu Ala Pro Val
 305 310 315 320
 Pro Ile Pro Pro Ser Pro Asp Thr Lys Asp Arg Trp Arg Ser Met Thr
 325 330 335
 Val Val Pro Tyr Leu Glu Asp Leu His Gly Ala Asp Glu Asp Glu Asp
 340 345 350
 Leu Phe Asp Ile Glu Asp Asp Ile Ile Tyr Thr Gln Asp Phe Thr Val
 355 360 365
 Pro Gly Gln Val Pro Glu Glu Ala Ser His Asn Gly Gln Arg Arg
 370 375 380
 Gly Leu Pro Lys Ala Val Cys Met Asn Gly Thr Glu Ala Ala Gln Leu
 385 390 395 400
 Ser Thr Lys Ser Arg Ala Glu Gly Arg Ala Pro Asn Pro Ala Arg Lys
 405 410 415
 Ala Cys Ser Ala Ser Ser Lys Ile Arg Arg Leu Ser Ala Cys Lys Gln
 420 425 430
 Gln

<210> 127
 <211> 1488
 <212> DNA
 <213> Homo Sapiens

<400> 127
 gagggggcggg gcgggtgccgg caagatggct gcgcccgaga agatgacgtt tccccgagaaaa 60
 ccaaggccaca aaaagtacag ggccgcccctg aagaaggaga aacgaaagaa acgtcggcag 120

gaacttgctc	gactgagaga	ctcaggactc	tcacagaagg	aggaagagga	ggacactttt	180
attgaagaac	aacaactaga	agaagagaag	ctattggaaa	gagagaggca	aagattacat	240
gaggagtgtt	tgctaagaga	gcagaaggca	caagaagaat	tcagaataaa	gaagggaaaag	300
gaagaggcgg	ctaaaaaacg	gcaagaagaa	caagagagaa	agttaaagga	acaatggaa	360
gaacagcaga	ggaaagagag	agaagaggag	gacagaaac	gacaggagaa	gaaagaaaaa	420
gaggaagctt	tgcagaagat	gctggatcg	gctgaaaatg	agttggaaaa	tggtaccaca	480
tggccaaacc	cagaaccacc	cgtggatttc	agagtaatgg	agaaggatcg	agctaattgt	540
cccttctaca	gtaaaacagg	agcttgcaga	tttggagata	gatttcacg	taaacataat	600
ttcccaacat	ccagtcctac	ccttcttatt	aagagcatgt	ttacgacgtt	tggaatggag	660
cagtgcagga	gggatgacta	tgaccctgac	gcaaggctgg	agtacagcga	ggaagaaaacc	720
taccaacagt	tccttagactt	ctatgaggat	gtgttgcgg	agttcaagaa	cgtggggaaa	780
gtgattcagt	tcaaggtcag	ctgcaatttg	gaacctcacc	tgaggggcaa	tgtatatgtt	840
cagtaccagt	cggaagaaga	atgccaagca	gcccttctc	tgtttaacgg	acgatggtat	900
gcaggacgac	agctgcagt	tgaattctgc	cccgtgaccc	ggtgaaaaat	ggcgatttgt	960
ggtttatttg	aaatacaaca	atgtccaaga	ggaaagact	gcaactttct	tcatgtgttc	1020
agaaatccca	acaatgaatt	ctgggaagct	aatagagaca	tctacttgc	tccagatcg	1080
actggctct	ccttgggaa	gaactccgaa	aggagggaga	ggatgggcca	ccacgacgac	1140
tactacagca	ggctgcgggg	aaggagaaac	cctagtcac	accactccta	caaaagaaat	1200
gggaaatccg	agaggaaaag	tagtcgtcac	agggggaaaga	aatctcacaa	acgcacatca	1260
aagagtcggg	agaggcaca	ttcacgaagc	agaggaagaa	atagggaccg	cagcaggac	1320
cgcagccggg	gccccggcag	ccggagccgg	agccggagcc	ggagccgcag	gagccgcccgc	1380
agccggagcc	aaagttcctc	tagtcccga	agtcgtggca	ggaggaggtc	ggtaataga	1440
gacagaactg	ttcagagtcc	caaatccaaa	taaactagtt	ttgttctt		1488

<210> 128

<211> 482

<212> PRT

<213> Homo Sapiens

<400> 128

Met	Ala	Ala	Pro	Glu	Lys	Met	Thr	Phe	Pro	Glu	Lys	Pro	Ser	His	Lys
1				5				10				15			
Lys	Tyr	Arg	Ala	Ala	Leu	Lys	Glu	Lys	Arg	Lys	Lys	Arg	Arg	Gln	
					20			25				30			
Glu	Leu	Ala	Arg	Leu	Arg	Asp	Ser	Gly	Leu	Ser	Gln	Lys	Glu	Glu	Glu
					35			40				45			
Glu	Asp	Thr	Phe	Ile	Glu	Glu	Gln	Gln	Leu	Glu	Glu	Lys	Leu	Leu	
					50			55				60			
Glu	Arg	Glu	Arg	Gln	Arg	Leu	His	Glu	Glu	Trp	Leu	Leu	Arg	Glu	Gln
					65			70				75			80
Lys	Ala	Gln	Glu	Glu	Phe	Arg	Ile	Lys	Lys	Glu	Lys	Glu	Ala	Ala	
					85			90				95			
Lys	Lys	Arg	Gln	Glu	Glu	Gln	Glu	Arg	Lys	Leu	Lys	Glu	Gln	Trp	Glu
					100			105				110			
Glu	Gln	Gln	Arg	Lys	Glu	Arg	Glu	Glu	Glu	Gln	Lys	Arg	Gln	Glu	
					115			120				125			
Lys	Lys	Glu	Lys	Glu	Glu	Ala	Leu	Gln	Lys	Met	Leu	Asp	Gln	Ala	Glu
					130			135				140			
Asn	Glu	Leu	Glu	Asn	Gly	Thr	Thr	Trp	Gln	Asn	Pro	Glu	Pro	Pro	Val
					145			150				155			160
Asp	Phe	Arg	Val	Met	Glu	Lys	Asp	Arg	Ala	Asn	Cys	Pro	Phe	Tyr	Ser
					165			170				175			
Lys	Thr	Gly	Ala	Cys	Arg	Phe	Gly	Asp	Arg	Cys	Ser	Arg	Lys	His	Asn
					180			185				190			
Phe	Pro	Thr	Ser	Ser	Pro	Thr	Leu	Leu	Ile	Lys	Ser	Met	Phe	Thr	Thr

195	200	205
Phe	Gly	Met Glu Gln Cys Arg Arg Asp Asp Tyr Asp Pro Asp Ala Ser
210	215	220
Leu	Glu	Tyr Ser Glu Glu Glu Thr Tyr Gln Gln Phe Leu Asp Phe Tyr
225	230	235
Glu	Asp	Val Leu Pro Glu Phe Lys Asn Val Gly Lys Val Ile Gln Phe
245	250	255
Lys	Val	Ser Cys Asn Leu Glu Pro His Leu Arg Gly Asn Val Tyr Val
260	265	270
Gln	Tyr	Gln Ser Glu Glu Glu Cys Gln Ala Ala Leu Ser Leu Phe Asn
275	280	285
Gly	Arg	Trp Tyr Ala Gly Arg Gln Leu Gln Cys Glu Phe Cys Pro Val
290	295	300
Thr	Arg	Trp Lys Met Ala Ile Cys Gly Leu Phe Glu Ile Gln Gln Cys
305	310	315
Pro	Arg	Gly Lys His Cys Asn Phe Leu His Val Phe Arg Asn Pro Asn
325	330	335
Asn	Glu	Phe Trp Glu Ala Asn Arg Asp Ile Tyr Leu Ser Pro Asp Arg
340	345	350
Thr	Gly	Ser Ser Phe Gly Lys Asn Ser Glu Arg Arg Glu Arg Met Gly
355	360	365
His	His	Asp Asp Tyr Tyr Ser Arg Leu Arg Gly Arg Arg Asn Pro Ser
370	375	380
Pro	Asp	His Ser Tyr Lys Arg Asn Gly Glu Ser Glu Arg Lys Ser Ser
385	390	395
Arg	His	Arg Gly Lys Ser His Lys Arg Thr Ser Lys Ser Arg Glu
405	410	415
Arg	His	Asn Ser Arg Ser Arg Gly Arg Asn Arg Asp Arg Ser Arg Asp
420	425	430
Arg	Ser	Arg Gly Arg Gly Ser Arg Ser Arg Ser Arg Ser Arg
435	440	445
Arg	Ser	Arg Arg Ser Arg Ser Gln Ser Ser Ser Arg Ser Arg Ser Arg
450	455	460
Gly	Arg	Arg Arg Ser Gly Asn Arg Asp Arg Thr Val Gln Ser Pro Lys
465	470	475
Ser Lys		

<210> 129
 <211> 1663
 <212> DNA
 <213> Homo Sapiens

<400> 129

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tccaggcctg	ggtgcaggag	cattgcccg	agagcgctga	agaggctgtc	actctcctcg	180
aagatctgga	gcgggaactg	gatgagccag	gacaccaggt	ctcaactcct	ccaaacgaac	240
agaaaaccgg	gtgggagaag	atatcctctt	caggaactgc	aaaggaatcc	ccgagcagca	300
tgcagccaca	gccttggag	accagtccaca	aatacggatc	ttggggggccc	ctgtacatcc	360
aagagtctgg	ttaggagcag	gagttcgctc	aagatccaag	aaagggtccga	gattgcagat	420
tgagtaccca	gcacgaggaa	tcagcagatg	agcagaaaagg	ttctgaagca	gaggggctca	480
aaggggatat	aatttctgtg	attatcgcca	ataaaacctga	ggccagctta	gagaggcagt	540
gcgttaaacct	tgaaaaatgaa	aaaggaacaa	aaccctttt	tcaagaggca	ggctccaaga	600
aaggttagaga	atcagttcct	actaaaccta	ccccaa	gagacgttat	atatgtgt	660

aatgtggcaa	720
gggagaaacc	780
ttacgtgtgc	840
accaagtgtg	900
ggaaaagctt	960
cagccacagc	1020
tcaaacctca	1080
ccctccacta	1140
cagaacacac	1200
ttggtgacc	1260
ggccctatga	1320
ctgttaagtgt	1380
ggaaaagctt	1440
ctcgacaccc	1500
tttgcaggaa	1560
gcttcagcg	1620
ggaaaaggcag	1663
cctcattcgt	
cactatcgga	
tccacactgg	
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tatcagtgt	
acgaatgtgg	
gaagagctc	
agtcaaggat	
ctcccaccag	
agactccaca	
ccggagagaa	
gccatataag	
tgtaaggagt	
gtgggaaagc	
cttcaaccac	
agctccaact	
tcaataaaca	
ccacagaatc	
cacaccgggg	
aaaagcccta	
ctggtgtcat	
cactgtggaa	
agaccttctg	
tagcaagtcc	
aatcttcca	
aacatcagcg	
agtccacact	
ggagagggag	
aagcaccgta	
acttcaagc	
gctcctgttg	
ttgtcggtt	
tttaaacttt	
agaatctgaa	
aaccagaaag	
aagtcttgtc	
attgcagcag	
catcgattcc	
ggtgatagag	
tttgtatcac	
tcaacatca	
gggatgcctg	
aggagtgcga	
gctccacagc	
aacatggcag	
gcaggaggc	
ctcagaagg	
gtcaggaggt	
tccacactcg	
ccagttca	
ggagcagagt	
ccttcgcca	
cacttagg	
cccagtaagc	
catgccagca	
ttacctttt	
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cagacgtgt	
tccagtctag	
ttaaggaaga	
aacattaaga	
ttgttaatt	
tttaacatat	
attcaagaat	
tttaatttgt	
aaagaattga	
gccacattga	
acacaattga	
atgagattca	
gaataaaactt	
ataacatctt	
aaa	

<210> 130

<211> 412

<212> PRT

<213> Homo Sapiens

<400> 130

Ala	Leu	Ser	Gln	Leu	Arg	Val	Leu	Cys	Cys	Glu	Trp	Leu	Arg	Pro	Glu
1				5				10				15			
Ile	His	Thr	Lys	Glu	Gln	Ile	Leu	Glu	Leu	Leu	Val	Leu	Glu	Gln	Phe
						20		25				30			
Leu	Thr	Ile	Leu	Pro	Gln	Glu	Leu	Gln	Ala	Trp	Val	Gln	Glu	His	Cys
						35		40				45			
Pro	Glu	Ser	Ala	Glu	Glu	Ala	Val	Thr	Leu	Leu	Glu	Asp	Leu	Glu	Arg
						50		55				60			
Glu	Leu	Asp	Glu	Pro	Gly	His	Gln	Val	Ser	Thr	Pro	Pro	Asn	Glu	Gln
						65		70				75			80
Lys	Pro	Val	Trp	Glu	Lys	Ile	Ser	Ser	Ser	Gly	Thr	Ala	Lys	Glu	Ser
						85		90				95			
Pro	Ser	Ser	Met	Gln	Pro	Gln	Pro	Leu	Glu	Thr	Ser	His	Lys	Tyr	Glu
						100		105				110			
Ser	Trp	Gly	Pro	Leu	Tyr	Ile	Gln	Glu	Ser	Gly	Glu	Glu	Gln	Glu	Phe
						115		120				125			
Ala	Gln	Asp	Pro	Arg	Lys	Val	Arg	Asp	Cys	Arg	Leu	Ser	Thr	Gln	His
						130		135				140			
Glu	Glu	Ser	Ala	Asp	Glu	Gln	Lys	Gly	Ser	Glu	Ala	Glu	Gly	Leu	Lys
						145		150				155			160
Gly	Asp	Ile	Ile	Ser	Val	Ile	Ile	Ala	Asn	Lys	Pro	Glu	Ala	Ser	Leu
						165		170				175			
Glu	Arg	Gln	Cys	Val	Asn	Leu	Glu	Asn	Glu	Lys	Gly	Thr	Lys	Pro	Pro
						180		185				190			
Leu	Gln	Glu	Ala	Gly	Ser	Lys	Lys	Gly	Arg	Glu	Ser	Val	Pro	Thr	Lys
						195		200				205			
Pro	Thr	Pro	Gly	Glu	Arg	Arg	Tyr	Ile	Cys	Ala	Glu	Cys	Gly	Lys	Ala
						210		215				220			
Phe	Ser	Asn	Ser	Ser	Asn	Leu	Thr	Lys	His	Arg	Arg	Thr	His	Thr	Gly
						225		230				235			240
Glu	Lys	Pro	Tyr	Val	Cys	Thr	Lys	Cys	Gly	Lys	Ala	Phe	Ser	His	Ser

245	250	255
Ser Asn Leu Thr Leu His Tyr Arg Thr His Leu Val Asp Arg Pro Tyr		
260	265	270
Asp Cys Lys Cys Gly Lys Ala Phe Gly Gln Ser Ser Asp Leu Leu Lys		
275	280	285
His Gln Arg Met His Thr Glu Glu Ala Pro Tyr Gln Cys Lys Asp Cys		
290	295	300
Gly Lys Ala Phe Ser Gly Lys Gly Ser Leu Ile Arg His Tyr Arg Ile		
305	310	315
His Thr Gly Glu Lys Pro Tyr Gln Cys Asn Glu Cys Gly Lys Ser Phe		
325	330	335
Ser Gln His Ala Gly Leu Ser Ser His Gln Arg Leu His Thr Gly Glu		
340	345	350
Lys Pro Tyr Lys Cys Lys Glu Cys Gly Lys Ala Phe Asn His Ser Ser		
355	360	365
Asn Phe Asn Lys His His Arg Ile His Thr Gly Glu Lys Pro Tyr Trp		
370	375	380
Cys His His Cys Gly Lys Thr Phe Cys Ser Lys Ser Asn Leu Ser Lys		
385	390	395
His Gln Arg Val His Thr Gly Glu Gly Glu Ala Pro		
405	410	

<210> 131

<211> 724

<212> DNA

<213> Homo Sapiens

<400> 131

ggagaatgaa aagcagaaaag tggcagagct gtattctatc cataactctg gagacaaaatc	60
tgtatattcag gacctcctgg agagtgtcag gctggacaaa gaaaaaggcag agactttggc	120
tagtagcttgc caggaagatc tggctcatac ccgaaatgtat gccaatcgat tacaggatgc	180
cattgctaag gtagaggatg aataccgagc cttccaagaaa gaagctaaga aacaaattga	240
agatttgaat atgacgtttag aaaaattaag atcagacctg gatgaaaaag aaacagaaaag	300
gagtgcacatg aaagaaaacca tctttgaact tgaagatgaa gtagaacaac atcgtgctgt	360
gaaacttcat gacaacctca ttatttctga tctagagaat acagttaaaa aactccagga	420
ccaaaagcac gacatggaaa gagaaataaa gacactccac agaagacttc gggagaatac	480
tgcggaatgg cggcagtttc aggctgatct ccagactgca gtagtcattg caaatgcacat	540
taaatctgaa gccaagagg agattggtga tctaaagcgc cgggtacatg aggctcaaga	600
aaaaaatgag aaactcacaa aagaattgga ggaaataagt ccgccaagcc agaagangac	660
gangccgta ttccantaca tgnatgcccc tgagagagaa tttggcaggc cttaaggcag	720
ggaa	724

<210> 132

<211> 218

<212> PRT

<213> Homo Sapiens

<400> 132

Glu Asn Glu Lys Gln Lys Val Ala Glu Leu Tyr Ser Ile His Asn Ser			
1	5	10	15
Gly Asp Lys Ser Asp Ile Gln Asp Leu Leu Glu Ser Val Arg Leu Asp			
20	25	30	
Lys Glu Lys Ala Glu Thr Leu Ala Ser Ser Leu Gln Glu Asp Leu Ala			
35	40	45	
His Thr Arg Asn Asp Ala Asn Arg Leu Gln Asp Ala Ile Ala Lys Val			

50	55	60
Glu	Asp	Glu
Tyr	Arg	Ala
Phe	Gln	Glu
Glu	Lys	Lys
Ala	Lys	Gln
Ile	Glu	
65	70	75
Asp	Leu	Asn
Met	Thr	Leu
Glu	Lys	Leu
Arg	Ser	Asp
Leu	Asp	Glu
Lys		
85	90	95
Glu	Thr	Glu
Arg	Ser	Asp
Met	Lys	Glu
Thr	Ile	Phe
Ile	Glu	Leu
Glu		Asp
100	105	110
Glu	Val	Gln
His	Arg	Ala
Val	Lys	Leu
His	Asp	Asn
Leu	Ile	Ile
115	120	125
Ser	Asp	Leu
Glu	Abs	Thr
Val	Lys	Lys
Leu	Gln	Asp
Gln	Lys	Gln
His	Asp	His
Asp		Asp
130	135	140
Met	Glu	Arg
Glu	Ile	Lys
Thr	Leu	His
Arg	Arg	Leu
Arg	Glu	Arg
Glu	Glu	Glu
145	150	155
Ala	Glu	Trp
Trp	Arg	Gln
Gln	Phe	Ala
Ala	Asp	Leu
Asp	Gln	Thr
Leu	Thr	Ala
Val	Val	Val
Ile		
165	170	175
Ala	Asn	Asp
Asp	Ile	Lys
Glu	Ala	Gln
Glu	Glu	Ile
Ile	Gly	Gly
Gly	Asp	Leu
Asp		Lys
180	185	190
Arg	Arg	Val
Val	His	Glu
Glu	Ala	Gln
Glu	Lys	Asn
Lys	Leu	Thr
Leu	Thr	Lys
Glu		Glu
195	200	205
Leu	Glu	Ile
Ile	Ser	Pro
Pro	Ser	Gln
Gln	Lys	
210	215	

<210> 133

<211> 719

<212> DNA

<213> Homo Sapiens

<400> 133

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tgggtggaggg	tttgcagaaa	caacccagga	gaccaaggcg	gtgactgtcc	atgttcacgg	120
ccaggaagtc	ctgtcagagg	agacggtgca	tttaggagcg	gagcctgagt	cacctaata	180
gctgcaggat	cctgtgcaaa	gctcgacccc	cgagcagtct	cctgaggaaa	ccacacagag	240
cccagatctg	ggggcaccgg	cagagcagcg	tccacaccag	gaagaggagc	tccagaccct	300
gcaggagagc	gaggccccag	tgccccgagga	cccagacctt	cctgcagaga	ggagctctgg	360
agactcagag	atggttgctc	ttcttactgc	tctgtcacag	ggactggtaa	cgttcaagga	420
tgtggccgta	tgcttttccc	aggaccagtg	gagtgatctg	gacccaacac	agaaaagagtt	480
ctatggagaa	tatgtcttgg	aagaagactg	tgaaatttgtt	gtctctctgt	catttccaat	540
ccccagacacct	gatgagatct	cccaggttag	agaggaagag	cccttgggtc	ccagatatcc	600
aagagcctna	ggagactcaa	gagccagaaa	tcttgagtt	tacctacaca	ggagatagga	660
gttnaagatga	aggaaaatgt	ctggagccag	gaagaatctg	agtttgagg	atataccca	719

<210> 134

<211> 217

<212> PRT

<213> Homo Sapiens

<400> 134

Arg	Thr	Thr	Glu	Leu	Gly	Ala	Gly	Pro	Thr	Ala	Arg	Lys	Trp	Arg	Gly
1			5			10			15						
Gly	Ser	Asp	Ala	Gly	Gly	Gly	Phe	Ala	Glu	Thr	Thr	Gln	Glu	Thr	Lys
									20	25		30			
Ala	Val	Thr	Val	His	Val	His	Gly	Gln	Glu	Val	Leu	Ser	Glu	Leu	Thr
									35	40		45			
Val	His	Leu	Gly	Ala	Glu	Pro	Glu	Ser	Pro	Asn	Glu	Leu	Gln	Asp	Pro
									50	55		60			

Val Gln Ser Ser Thr Pro Glu Gln Ser Pro Glu Glu Thr Thr Gln Ser
 65 70 75 80
 Pro Asp Leu Gly Ala Pro Ala Glu Gln Arg Pro His Gln Glu Glu
 85 90 95
 Leu Gln Thr Leu Gln Glu Ser Glu Val Pro Val Pro Glu Asp Pro Asp
 100 105 110
 Leu Pro Ala Glu Arg Ser Ser Gly Asp Ser Glu Met Val Ala Leu Leu
 115 120 125
 Thr Ala Leu Ser Gln Gly Leu Val Thr Phe Lys Asp Val Ala Val Cys
 130 135 140
 Phe Ser Gln Asp Gln Trp Ser Asp Leu Asp Pro Thr Gln Lys Glu Phe
 145 150 155 160
 Tyr Gly Glu Tyr Val Leu Glu Glu Asp Cys Gly Ile Val Val Ser Leu
 165 170 175
 Ser Phe Pro Ile Pro Arg Pro Asp Glu Ile Ser Gln Val Arg Glu Glu
 180 185 190
 Glu Pro Leu Gly Pro Arg Tyr Pro Arg Ala Gly Asp Ser Arg Ala Arg
 195 200 205
 Asn Pro Glu Phe Tyr Leu His Arg Arg
 210 215

<210> 135
<211> 1027
<212> DNA
<213> Homo Sapiens

<400> 135
gcgaggcgca gggcgaggcg gtgctcatgg aggaggacact gatccagcag agcctggacg 60
actacgacgc cggcaggtac agcccgccgc tgctcacgc gcacagactg ccactggacg 120
cgcacgtgct ggaaccggat gaggacactgc agcgcctgca gctctcgcc cagcagctcc 180
aggtcacggg agacgccagc gagagcgcgg aggacatctt cttccggcgg gccaaggagg 240
gcatggccca ggacgaggcg cagttcagcg tggagatgcc actcacccgc aaggcctacc 300
tgtggccga caagtaccgg ccacgcaga cgcgcattttt caaccgcgtg cacacgggct 360
tcgagtgaa caagtacaac cagacgcact acgactttga caaccaccgc cccaagatcg 420
tgcaggata caagttcaac atcttctacc ccgacccat cgacaagcgc tccacgcggc 480
agtaacttctt ggaggcctgc gccgacaaca aggatttcgc catcctgcgc ttcacgcggg 540
gccgcctacg aggacatcgc tttcaagatc gtcaaccgcg agtggaaata ctngcaccgc 600
cacggcttcc gctgccagtt tgccaaacggc attttccanc tgngettca cttcaagcgc 660
tnccgcatac ggccgtgacg gcccggggg acggcaggcc aggaggccg agggccacac 720
gggtgccaca gcccaggctcg gagtgccca gccggcaggc ttgttttca gcatccgacg 780
ggaacatctc caacagaagc aaaacggaaa gtgcctcccg gaccccccaga gggccaccca 840
acctcaccag tcaccagccc cagaccaccc acagccccctc ccagacaccc cgcctcatct 900
ggaaatagtt ccgtttgttt ctctaaaaag acttgttagt gggaaaaaaaaa atcttttggt 960
ctcatggaat tggcctattg gcaagatcgc atgtttttt aataaacgtt gtattttaga 1020
ataaaaaa 1027

<210> 136
<211> 299
<212> PRT
<213> Homo Sapiens

<400> 136
Glu Gly Glu Gly Glu Ala Val Leu Met Glu Glu Asp Leu Ile Gln Gln
1 5 10 15
Ser Leu Asp Asp Tyr Asp Ala Gly Arg Tyr Ser Pro Arg Leu Leu Thr

20	25	30
Ala His Glu Leu Pro Leu Asp Ala His Val Leu Glu Pro Asp Glu Asp		
35	40	45
Leu Gln Arg Leu Gln Leu Ser Arg Gln Gln Leu Gln Val Thr Gly Asp		
50	55	60
Ala Ser Glu Ser Ala Glu Asp Ile Phe Phe Arg Arg Ala Lys Glu Gly		
65	70	75
Met Gly Gln Asp Glu Ala Gln Phe Ser Val Glu Met Pro Leu Thr Gly		
85	90	95
Lys Ala Tyr Leu Trp Ala Asp Lys Tyr Arg Pro Arg Lys Pro Arg Phe		
100	105	110
Phe Asn Arg Val His Thr Gly Phe Glu Trp Asn Lys Tyr Asn Gln Thr		
115	120	125
His Tyr Asp Phe Asp Asn Pro Pro Pro Lys Ile Val Gln Gly Tyr Lys		
130	135	140
Phe Asn Ile Phe Tyr Pro Asp Leu Ile Asp Lys Arg Ser Thr Pro Glu		
145	150	155
Tyr Phe Leu Glu Ala Cys Ala Asp Asn Lys Asp Phe Ala Ile Leu Arg		
165	170	175
Phe Thr Arg Gly Arg Leu Arg Gly His Arg Phe Gln Asp Arg Gln Pro		
180	185	190
Arg Val Gly Ile Leu Ala Pro Pro Arg Leu Pro Leu Pro Val Cys Gln		
195	200	205
Arg His Phe Pro Leu Ser Leu Gln Ala Leu Pro Leu Ser Ala Val Thr		
210	215	220
Ala Leu Gly Asn Gly Arg Pro Gly Gly Pro Arg Ala Thr Arg Val Pro		
225	230	235
Gln Pro Arg Ser Glu Trp Pro Ser Arg Gln Ala Cys Phe Ser Ala Ser		
245	250	255
Asp Gly Asn Ile Ser Asn Arg Ser Lys Thr Glu Ser Ala Ser Arg Thr		
260	265	270
Pro Arg Gly Pro Pro Asn Leu Thr Ser His Gln Pro Gln Thr Thr His		
275	280	285
Ser Pro Ser Gln Thr Pro Arg Leu Ile Trp Lys		
290	295	

<210> 137
 <211> 766
 <212> DNA
 <213> Homo Sapiens

<400> 137

caaaggttta cacagtaaac aatgtgaatg tgatcaccaa aatacgcaca gaacatctga	60
ccgaggagga aaaaaagaga tataaagaca ggaacccgct ggaatcttg ctgggaactg	120
tggAACACCA atttggtgca caaggggacc tcaccacgga atgtgctact gcaaacaacc	180
ccacagccat cacgcctgat gagtaacttca atgaagagtt tgatctgaaa gacagggaca	240
ttggaaaggcc gaaagagctg acgattagaa cacagaagtt taaagcaatg ttgtggatgt	300
gtgaagagtt tccccctctt ctgggtggagc aggtcattcc catcattgac ctaatggctc	360
gaacgagtgc tcattttgca agactgagag atttcatcaa attggaattc ccacctggat	420
ttccctgtcaa aatacgatcc cacatcacaa actttgaggt tgatcaatct gtgtttgaaa	480
ttccccgaatc ttactatgtt caagacaatg gcagaaatgt gcatttgcaa gatgaagatt	540
acgagataat gcagttgcc atccagcaaa gtctgctgga gtccagcagg agccaggaac	600
tttcaggacc agcttcgaat ggagggatca gccagacaaa cacstatgac gcccagtatg	660
agagggccat ncaggagagc cttctaccag cacagaaage ctgtgcCCCC agcgccccctg	720
agcgagacna gcccgtttga taatggactt gcagctaacc catgga	766

<210> 138
<211> 243
<212> PRT
<213> Homo Sapiens

<400> 138

Lys	Val	Tyr	Thr	Val	Asn	Asn	Val	Asn	Val	Ile	Thr	Lys	Ile	Arg	Thr
1				5					10					15	
Glu	His	Leu	Thr	Glu	Glu	Glu	Lys	Lys	Arg	Tyr	Lys	Asp	Arg	Asn	Pro
				20				25					30		
Leu	Glu	Ser	Leu	Leu	Gly	Thr	Val	Glu	His	Gln	Phe	Gly	Ala	Gln	Gly
				35				40				45			
Asp	Leu	Thr	Thr	Glu	Cys	Ala	Thr	Ala	Asn	Asn	Pro	Thr	Ala	Ile	Thr
				50				55			60				
Pro	Asp	Glu	Tyr	Phe	Asn	Glu	Glu	Phe	Asp	Leu	Lys	Asp	Arg	Asp	Ile
				65				70			75		80		
Gly	Arg	Pro	Lys	Glu	Leu	Thr	Ile	Arg	Thr	Gln	Lys	Phe	Lys	Ala	Met
				85				90				95			
Leu	Trp	Met	Cys	Glu	Glu	Phe	Pro	Leu	Ser	Leu	Val	Glu	Gln	Val	Ile
				100				105				110			
Pro	Ile	Ile	Asp	Leu	Met	Ala	Arg	Thr	Ser	Ala	His	Phe	Ala	Arg	Leu
				115				120			125				
Arg	Asp	Phe	Ile	Lys	Leu	Glu	Phe	Pro	Pro	Gly	Phe	Pro	Val	Lys	Ile
				130				135			140				
Ala	Ser	His	Ile	Thr	Asn	Phe	Glu	Val	Asp	Gln	Ser	Val	Phe	Glu	Ile
				145				150			155		160		
Pro	Glu	Ser	Tyr	Tyr	Val	Gln	Asp	Asn	Gly	Arg	Asn	Val	His	Leu	Gln
				165				170			175				
Asp	Glu	Asp	Tyr	Glu	Ile	Met	Gln	Phe	Ala	Ile	Gln	Gln	Ser	Leu	Leu
				180				185			190				
Glu	Ser	Ser	Arg	Ser	Gln	Glu	Leu	Ser	Gly	Pro	Ala	Ser	Asn	Gly	Gly
				195				200			205				
Ile	Ser	Gln	Thr	Asn	Thr	Tyr	Asp	Ala	Gln	Tyr	Glu	Arg	Ala	Gln	Glu
				210				215			220				
Ser	Leu	Leu	Pro	Ala	Gln	Lys	Ala	Cys	Ala	Pro	Ser	Ala	Pro	Glu	Arg
				225				230			235		240		
Asp	Pro	Phe													

<210> 139
<211> 3060
<212> DNA
<213> Homo Sapiens

<400> 139

ccggggcgaaaa	gtgcggcgag	agccggctgg	ctgagcttag	cgtccgagga	ggcggcgccg	60
gcggcgccgg	cagcggcgcc	ggcggggctg	tggggcggtg	cggaaagcag	aggcgaggag	120
cgcggggccc	gtggccagag	tctggcgccg	gcctggcgga	gcggagagca	gcgccccgccc	180
ctcgccgtgc	ggaggagccc	cgcacacaat	agcggcgccg	gcagccccgg	cccttcccccc	240
cggcgccgcccc	cgcggcgccg	gccgagcgcc	ccgctccgccc	tcacactgcca	ccagggagtg	300
ggcggggcatt	tttcggccgccc	gccggccccc	cgcggggccca	tggggggccgc	ccggcgcccc	360
ggggccggggcc	tggcgaggccc	gccggcgccgc	cgctgagacg	ggccccggccc	gcagccccgg	420
ggcgcaggtta	aggccggccc	cgcgcgggttgc	gaccgggtgg	gtttcgccga	ggcgtggaaag	480
gcmcagttcc	cggactcaga	gcgcgcgcgc	atggagctgc	gttcagtgaaa	cgacatcgag	540
caggagctgg	agcgctgcaa	ggcgcgcatt	cggcgccctgg	agcaggaggt	gaaccaggag	600

cgcttcgcga tgatctacct gcagacgttg ctggccaagg aaaagaagag ctagaccgg 660
cagcgatggg gcttccggcg cgccggcgcag gcccccgacg gcgcctccga gccccgagcg 720
tcccgctcgc gccccgagcc agcggcccgcc gacggagccg acccgccgccc cgccgaggag 780
cccgaggccc ggccccgacgg cgagggttct ccgggttaagg ccaggccccgg gaccggcccg 840
aggccccggg cagccgcgtc gggggAACGG gacgaccggg gaccccccgc cagcgtggcg 900
gcgcgtcagg tccaacttcga gcggatccgc aaggccatg gccagccccgg ggcggacgccc 960
gagaagccct tctacgtaaa cgtcgagttt caccacgagc gggcctgggt gaaggtaaac 1020
gacaaagagg tgtcggaccg catcagctcc ctgggcagcc aggccatgca gatggagcgc 1080
aaaaagtccc agcacggcgc gggctcgagc gtggggatg catccaggcc cccttaccgg 1140
ggacgctcct cggagagcag ctggggcgtc gacggcgact acgaggacgc cgagttgaac 1200
ccccgcttcc tgaaggacaa cctgatcgac gccaatggcg gtagcaggcc cccttggccg 1260
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gtgtccccaa gccccaccac ctaccgcata ttccgggaca aaagccgctc tccctcgccag 1560
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cggaactgcc cgggttgtcgt gtccggaggcc accatcgatgg gctccgcata gaccgggcag 1680
atctggccca acgatggcga gggcccttc catggagacg cagatggctc gttcggaaaca 1740
ccacctggat acggctgcgc tgcaagacgg gcaagggagc agcggccggca ccaagatggg 1800
ctgcccata ttgatgactc gccccttcata tcgccccacc tcagcagcaa gggcaggggc 1860
agccgggatg cgctggctc gggagccctg gagtccacta aagcgagtga gctggacttg 1920
gaaaagggtt tggagatgag aaaatgggtc ctgtcgggaa tcctggctag cgaggagact 1980
tacctgagcc acctggaggc actgctgctg cccatgaagc ctttggaaagc cgctgcccacc 2040
acctctcagc cggtgctgac gagtcagcag atcgagacca tcttcttcaa agtgcctgag 2100
ctctacgaga tccacaaggaa gtttatgat gggctttcc cccgcgtgca gcagtggagc 2160
caccagcagc ggggtggcgca cctcttccag aagctggcca gcaagctggg tttgtaccgg 2220
gccttcgtgg acaactacgg agttgccatg gaaatggctg agaagtgtct tcaggccaat 2280
gctcagttt cagaaatctc cgagaacctg agagccagaa gcaacaaaga tgccaaaggat 2340
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agcacgctgg tcctccatga cttgctgaag cacactctg ccagccaccc tgaccacccc 2460
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acaccccgac ggcagtcata gacgggtgaag aaggggagac accggcagct gctgaaggac 2580
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gagctgttcc tctgcacccaa gctcaagaag cagagccggag gcaaaaacgcgca gcagatgac 2700
tgcaaatggt acatcccgct cacggatctc agcttccaga tttgtggatga actggaggca 2760
gtgccccaca tccccctggt gccccatgag gagctggacg ctttgaagat caagatctcc 2820
cagatcaaga gtgacatcca gagagagaag agggcgaaca agggcagcaa ggctacggag 2880
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gccttcaggg tgcacagccg caacggcaag agttacacgt tcctgtatctc ctctgactat 3000
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<210> 140

<211> 872

<212> PRT

<213> Homo Sapiens

<400> 140

Met	Val	Asp	Pro	Val	Gly	Phe	Ala	Glu	Ala	Trp	Lys	Ala	Gln	Phe	Pro	
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Asp	Ser	Glu	Pro	Pro	Arg	Met	Glu	Leu	Arg	Ser	Val	Gly	Asp	Ile	Glu	
														20	25	30
Gln	Glu	Leu	Glu	Arg	Cys	Lys	Ala	Ser	Ile	Arg	Arg	Leu	Glu	Gln	Glu	
														35	40	45
Val	Asn	Gln	Glu	Arg	Phe	Arg	Met	Ile	Tyr	Leu	Gln	Thr	Leu	Leu	Ala	

50	55	60													
Lys	Glu	Lys	Lys	Ser	Tyr	Asp	Arg	Gln	Arg	Trp	Gly	Phe	Arg	Arg	Ala
65															80
Ala	Gln	Ala	Pro	Asp	Gly	Ala	Ser	Glu	Pro	Arg	Ala	Ser	Ala	Ser	Arg
															95
85															
Pro	Gln	Pro	Ala	Pro	Ala	Asp	Gly	Ala	Asp	Pro	Pro	Pro	Ala	Glu	Glu
															110
100															
Pro	Glu	Ala	Arg	Pro	Asp	Gly	Glu	Gly	Ser	Pro	Gly	Lys	Ala	Arg	Pro
															125
115															
Gly	Thr	Ala	Arg	Arg	Pro	Gly	Ala	Ala	Ala	Ser	Gly	Glu	Arg	Asp	Asp
															140
130															
Arg	Gly	Pro	Pro	Ala	Ser	Val	Ala	Ala	Leu	Arg	Ser	Asn	Phe	Glu	Arg
															160
145															
Ile	Arg	Lys	Gly	His	Gly	Gln	Pro	Gly	Ala	Asp	Ala	Glu	Lys	Pro	Phe
															175
165															
Tyr	Val	Asn	Val	Glu	Phe	His	His	Glu	Arg	Gly	Leu	Val	Lys	Val	Asn
															190
180															
Asp	Lys	Glu	Val	Ser	Asp	Arg	Ile	Ser	Ser	Leu	Gly	Ser	Gln	Ala	Met
															205
195															
Gln	Met	Glu	Arg	Lys	Lys	Ser	Gln	His	Gly	Ala	Gly	Ser	Ser	Val	Gly
															220
210															
Asp	Ala	Ser	Arg	Pro	Pro	Tyr	Arg	Gly	Arg	Ser	Ser	Glu	Ser	Ser	Cys
															240
225															
Gly	Val	Asp	Gly	Asp	Tyr	Glu	Asp	Ala	Glu	Leu	Asn	Pro	Arg	Phe	Leu
															255
245															
Lys	Asp	Asn	Leu	Ile	Asp	Ala	Asn	Gly	Gly	Ser	Arg	Pro	Pro	Trp	Pro
															270
260															
Pro	Leu	Glu	Tyr	Gln	Pro	Tyr	Gln	Ser	Ile	Tyr	Val	Gly	Gly	Met	Met
															285
275															
Glu	Gly	Glu	Gly	Lys	Gly	Pro	Leu	Leu	Arg	Ser	Gln	Ser	Thr	Ser	Glu
															300
290															
Gln	Glu	Lys	Arg	Leu	Thr	Trp	Pro	Arg	Arg	Ser	Tyr	Ser	Pro	Arg	Ser
															320
305															
Phe	Glu	Asp	Cys	Gly	Gly	Tyr	Thr	Pro	Asp	Cys	Ser	Ser	Asn	Glu	
															335
325															
Asn	Leu	Thr	Ser	Ser	Glu	Glu	Asp	Phe	Ser	Ser	Gly	Gln	Ser	Ser	Arg
															350
340															
Val	Ser	Pro	Ser	Pro	Thr	Thr	Tyr	Arg	Met	Phe	Arg	Asp	Lys	Ser	Arg
															365
355															
Ser	Pro	Ser	Gln	Asn	Ser	Gln	Gln	Ser	Phe	Asp	Ser	Ser	Ser	Pro	Pro
															380
370															
Thr	Pro	Gln	Cys	His	Lys	Arg	His	Arg	His	Cys	Pro	Val	Val	Val	Ser
															400
385															
Glu	Ala	Thr	Ile	Val	Gly	Val	Arg	Lys	Thr	Gly	Gln	Ile	Trp	Pro	Asn
															415
405															
Asp	Gly	Glu	Gly	Ala	Phe	His	Gly	Asp	Ala	Asp	Gly	Ser	Phe	Gly	Thr
															430
420															
Pro	Pro	Gly	Tyr	Gly	Cys	Ala	Ala	Asp	Arg	Ala	Glu	Glu	Gln	Arg	Arg
															445
435															
His	Gln	Asp	Gly	Leu	Pro	Tyr	Ile	Asp	Asp	Ser	Pro	Ser	Ser	Pro	
															460
450															
His	Leu	Ser	Ser	Lys	Gly	Arg	Gly	Ser	Arg	Asp	Ala	Leu	Val	Ser	Gly
															480
465															
Ala	Leu	Glu	Ser	Thr	Lys	Ala	Ser	Glu	Leu	Asp	Leu	Glu	Lys	Gly	Leu
															495
485															

Glu Met Arg Lys Trp Val Leu Ser Gly Ile Leu Ala Ser Glu Glu Thr
 500 505 510
 Tyr Leu Ser His Leu Glu Ala Leu Leu Leu Pro Met Lys Pro Leu Lys
 515 520 525
 Ala Ala Ala Thr Thr Ser Gln Pro Val Leu Thr Ser Gln Gln Ile Glu
 530 535 540
 Thr Ile Phe Phe Lys Val Pro Glu Leu Tyr Glu Ile His Lys Glu Phe
 545 550 555 560
 Tyr Asp Gly Leu Phe Pro Arg Val Gln Gln Trp Ser His Gln Gln Arg
 565 570 575
 Val Gly Asp Leu Phe Gln Lys Leu Ala Ser Gln Leu Gly Val Tyr Arg
 580 585 590
 Ala Phe Val Asp Asn Tyr Gly Val Ala Met Glu Met Ala Glu Lys Cys
 595 600 605
 Cys Gln Ala Asn Ala Gln Phe Ala Glu Ile Ser Glu Asn Leu Arg Ala
 610 615 620
 Arg Ser Asn Lys Asp Ala Lys Asp Pro Thr Thr Lys Asn Ser Leu Glu
 625 630 635 640
 Thr Leu Leu Tyr Lys Pro Val Asp Arg Val Thr Arg Ser Thr Leu Val
 645 650 655
 Leu His Asp Leu Leu Lys His Thr Pro Ala Ser His Pro Asp His Pro
 660 665 670
 Leu Leu Gln Asp Ala Leu Arg Ile Ser Gln Asn Phe Leu Ser Ser Ile
 675 680 685
 Asn Glu Glu Ile Thr Pro Arg Arg Gln Ser Met Thr Val Lys Lys Gly
 690 695 700
 Glu His Arg Gln Leu Leu Lys Asp Ser Phe Met Val Glu Leu Val Glu
 705 710 715 720
 Gly Ala Arg Lys Leu Arg His Val Phe Leu Phe Thr Glu Leu Leu
 725 730 735
 Cys Thr Lys Leu Lys Lys Gln Ser Gly Gly Lys Thr Gln Gln Tyr Asp
 740 745 750
 Cys Lys Trp Tyr Ile Pro Leu Thr Asp Leu Ser Phe Gln Met Val Asp
 755 760 765
 Glu Leu Glu Ala Val Pro Asn Ile Pro Leu Val Pro Asp Glu Glu Leu
 770 775 780
 Asp Ala Leu Lys Ile Lys Ile Ser Gln Ile Lys Ser Asp Ile Gln Arg
 785 790 795 800
 Glu Lys Arg Ala Asn Lys Gly Ser Lys Ala Thr Glu Arg Leu Lys Lys
 805 810 815
 Lys Leu Ser Glu Gln Glu Ser Leu Leu Leu Met Ser Pro Ser Met
 820 825 830
 Ala Phe Arg Val His Ser Arg Asn Gly Lys Ser Tyr Thr Phe Leu Ile
 835 840 845
 Ser Ser Asp Tyr Glu Arg Ala Glu Trp Arg Glu Asn Ile Arg Glu Gln
 850 855 860
 Gln Lys Lys Cys Phe Arg Ser Phe
 865 870

<210> 141
 <211> 691
 <212> DNA
 <213> Homo Sapiens

<400> 141

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gttggagtct	gatctttcc	cgacgtctac	ttccctgagt	cccttctacc	ttcggccacc	180
ctccttcctg	cgggcaccca	gctggttga	cactggactc	tcaagatgc	gcctggagaa	240
gacagaggta	tctgtcaacc	tggatgtgaa	gcacttctcc	ccagaggaac	tcaaagtta	300
gtgttgtgg	gatgtgattg	aggtgcattgg	aaaacatgaa	gagcgccagg	atgaacatgg	360
tttcatctcc	agggagttcc	acagggaaata	ccggatccca	gctgatgttag	accctctcac	420
cattacttca	tccctgtcat	ctgatgggt	cctcaactgt	aatggaccaa	ggaaacaggt	480
ctctggccct	gagcgcacca	ttccccatcac	ccgtgaagag	aagcctgctg	tcaccgcac	540
ccccaaagaaa	tagatgcct	ttcttgaatt	gcattttta	aaacaagaaa	gtttcccac	600
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<210> 142
<211> 175
<212> PRT
<213> Homo Sapiens

Met	Asp	Ile	Ala	Ile	His	His	Pro	Trp	Ile	Arg	Arg	Pro	Phe	Phe	Pro
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Phe	His	Ser	Pro	Ser	Arg	Leu	Phe	Asp	Gln	Phe	Phe	Gly	Glu	His	Leu
						20			25						30
Leu	Glu	Ser	Asp	Leu	Phe	Pro	Thr	Ser	Thr	Ser	Leu	Ser	Pro	Phe	Tyr
						35			40						45
Leu	Arg	Pro	Pro	Ser	Phe	Leu	Arg	Ala	Pro	Ser	Trp	Phe	Asp	Thr	Gly
						50			55						60
Leu	Ser	Glu	Met	Arg	Leu	Glu	Lys	Asp	Arg	Phe	Ser	Val	Asn	Leu	Asp
						65			70						80
Val	Lys	His	Phe	Ser	Pro	Glu	Glu	Leu	Lys	Val	Lys	Val	Leu	Gly	Asp
						85			90						95
Val	Ile	Glu	Val	His	Gly	Lys	His	Glu	Glu	Arg	Gln	Asp	Glu	His	Gly
						100			105						110
Phe	Ile	Ser	Arg	Glu	Phe	His	Arg	Lys	Tyr	Arg	Ile	Pro	Ala	Asp	Val
						115			120						125
Asp	Pro	Leu	Thr	Ile	Thr	Ser	Ser	Leu	Ser	Ser	Asp	Gly	Val	Leu	Thr
						130			135						140
Val	Asn	Gly	Pro	Arg	Lys	Gln	Val	Ser	Gly	Pro	Glu	Arg	Thr	Ile	Pro
						145			150						160
Ile	Thr	Arg	Glu	Glu	Lys	Pro	Ala	Val	Thr	Ala	Ala	Pro	Lys	Lys	
						165			170						175

<210> 143
<211> 1300
<212> DNA
<213> Homo Sapiens

<400> 143															
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tggtcaaaat	gcagaggcta	acattagaac	acttgaatca	gatgggttgg	atcgagtcaca	180									
tccttttgca	tgctcaagag	cccattttt	tcatcattcg	gaagcaacag	cggcagtcac	240									
ctgccccaa	gttgattact	atatcattgc	tggagtgtac	tatcaggcac	300										
cagacttgg	atcagttata	aactcttagag	tgcttactgc	agtgcattgtt	attcagtcag	360									
cttttgcata	agctatgtca	tactgtcgat	atcatccttc	caaagggtat	tggtggcact	420									

tcaaaagatca	tgaagagcaa	gataaagtca	gacctaaagc	caaaaggaaa	gaagaaccaa	480
gctctattt	tcagagacaa	cgtgtggatg	cttactttt	agacctcaga	caaaaatttc	540
cacccaaatt	tgtcgagcta	aaggcctggag	aaaagcctgt	tcaagtggat	caaacaaga	600
aagaggcaga	acctatacca	gaaactgtaa	aacctgagga	gaaggagacc	cccnnagaat	660
gtacaaccag	accgggagtg	ctaaaggccc	ccctgaaaaaa	cggatgagac	ttcagttagt	720
actggacaaa	agagaaggct	ggaagactcc	tcatgctagt	tatcataacct	cagtactgtg	780
gctcttgagc	tttgaagtac	tttattgtaa	ccttcttatt	tgtatggaat	gcgcattttt	840
tttgaaggaa	tattaggccg	gatgtgtgg	ctcacgcctg	taatcccagc	actttgggag	900
gccatggcgg	gtggatcaact	tgaggcaga	agttcaagac	cagcctgacc	aatatggta	960
aaccccgctct	ctactaaaaaa	tacaaaaatt	agccgggcgt	ggtggcgggc	gccccgtagtc	1020
ccagctactc	gggaggctga	gacaggagac	ttgcttgaac	ccgggaggtg	gaggttgc	1080
tgagctgatt	atcatgctgt	tgcactccag	cttgggcgac	agagcgagac	tttgtctcaa	1140
aaaagaagaa	aagatattac	tcccatcatg	atttcttgtg	aatatttgtt	atatgtcttc	1200
tgtaacctt	cctctcccg	acttgagcaa	cctacacact	cacatgttta	ctggtagata	1260
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<210> 144
 <211> 233
 <212> PRT
 <213> Homo Sapiens

<400> 144															
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				20				25					30		
Asp	Arg	Thr	Cys	Asn	Asn	Glu	Val	Val	Lys	Met	Gln	Arg	Leu	Thr	Leu
				35				40					45		
Glu	His	Leu	Asn	Gln	Met	Val	Gly	Ile	Glu	Tyr	Ile	Leu	Leu	His	Ala
					50			55					60		
Gln	Glu	Pro	Ile	Leu	Phe	Ile	Ile	Arg	Lys	Gln	Gln	Arg	Gln	Ser	Pro
				65			70			75			80		
Ala	Gln	Val	Ile	Pro	Leu	Ala	Asp	Tyr	Tyr	Ile	Ile	Ala	Gly	Val	Ile
				85				90					95		
Tyr	Gln	Ala	Pro	Asp	Leu	Gly	Ser	Val	Ile	Asn	Ser	Arg	Val	Leu	Thr
				100				105					110		
Ala	Val	His	Gly	Ile	Gln	Ser	Ala	Phe	Asp	Glu	Ala	Met	Ser	Tyr	Cys
				115				120					125		
Arg	Tyr	His	Pro	Ser	Lys	Gly	Tyr	Trp	Trp	His	Phe	Lys	Asp	His	Glu
				130			135			140					
Glu	Gln	Asp	Lys	Val	Arg	Pro	Lys	Ala	Lys	Arg	Lys	Glu	Glu	Pro	Ser
				145			150			155			160		
Ser	Ile	Phe	Gln	Arg	Gln	Arg	Val	Asp	Ala	Leu	Leu	Leu	Asp	Leu	Arg
				165				170					175		
Gln	Lys	Phe	Pro	Pro	Lys	Phe	Val	Gln	Leu	Lys	Pro	Gly	Glu	Lys	Pro
				180				185					190		
Val	Gln	Val	Asp	Gln	Thr	Lys	Lys	Glu	Ala	Glu	Pro	Ile	Pro	Glu	Thr
				195				200					205		
Val	Lys	Pro	Glu	Glu	Lys	Glu	Thr	Pro	Glu	Cys	Thr	Thr	Arg	Pro	Gly
				210				215					220		
Val	Leu	Lys	Ala	Pro	Leu	Lys	Asn	Gly							
				225				230							

<210> 145
 <211> 1528

<212> DNA
 <213> Homo Sapiens

<400> 145

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gcggccaact ccaatgggc tttccagccc gtggtcctc tccatattcg agatgttcct    180
cctgctgatc aagagaagct ttttatccag aagttacgtc agtggtgcgt cctcttgac   240
tttgttctg atccactaag tgacctaaag tggaaaggaag taaaacgagc tgctttaagt  300
gaaatggtag aatatatcac ccataatcg aatgtgatca cagagcctat ttacccagaa 360
gtagtcata tggggcagt taacatgtt cgaacattac cacccctc caatcctacg 420
ggagcggaat ttgacccgga ggaagatgaa ccaacgttag aagcagcctg gcctcatcta 480
cagcttgtt atgaattttt cttaaagattt ttagagtctc cagatttcca acctaataata 540
gcgaagaaaat atattgatca gaagttgta ttgcagctt tagagcttt tgacagtgaa 600
gatcctcggg agagagattt tcttaaaacc acccttcaca gaatctatgg gaaattccta 660
ggcttggagag cttacatcag aaaacagata aataatataat tttatagtt tattttgaa 720
acagagcatc ataatggcat agcagagttt ctggaaatatt tggaaagttt aattaatgga 780
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cacaaggta aatctctgag tgtctaccat cccagctgg catactgtgt agtgcagttt 900
tttagaaaagg acagcacccct cacggAACCA gtgggtatgg cacttctcaa atactggcca 960
aagactcaca gtccaaaaga agtaatgtt ttaaacgaat tagaagagat tttagatgtc 1020
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gtctccagcc cacacttcca ggtggcagag cgagctctt attactggaa taatgaatac 1140
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taccgcaact caaagaccca ttggaacaag acaatacatg gcttgatata caacgcccctg 1260
aagctcttca tggagatgaa cccaaagcta tttgatgact gtacacaaca gttcaagca 1320
gagaaaactaa aagagaagct aaaaatgaaa gaacgggaag aagcatgggt taaaatagaa 1380
aatctagcca aagccaatcc ccaggtacta aaaaagagaaa taacatgaaa aggcccaggg 1440
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tcactaacgt tgtatatgaa aatgtctg 1528

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<210> 146
 <211> 449
 <212> PRT
 <213> Homo Sapiens

<400> 146

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Met Leu Thr Cys Asn Lys Ala Gly Ser Arg Met Val Val Asp Ala Ala
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Asn Ser Asn Gly Pro Phe Gln Pro Val Val Leu Leu His Ile Arg Asp
 20          25          30
Val Pro Pro Ala Asp Gln Glu Lys Leu Phe Ile Gln Lys Leu Arg Gln
 35          40          45
Cys Cys Val Leu Phe Asp Phe Val Ser Asp Pro Leu Ser Asp Leu Lys
 50          55          60
Trp Lys Glu Val Lys Arg Ala Ala Leu Ser Glu Met Val Glu Tyr Ile
 65          70          75          80
Thr His Asn Arg Asn Val Ile Thr Glu Pro Ile Tyr Pro Glu Val Val
 85          90          95
His Met Phe Ala Val Asn Met Phe Arg Thr Leu Pro Pro Ser Ser Asn
 100         105         110
Pro Thr Gly Ala Glu Phe Asp Pro Glu Glu Asp Glu Pro Thr Leu Glu
 115         120         125
Ala Ala Trp Pro His Leu Gln Leu Val Tyr Glu Phe Phe Leu Arg Phe
 130         135         140

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Leu Glu Ser Pro Asp Phe Gln Pro Asn Ile Ala Lys Lys Tyr Ile Asp
 145 150 155 160
 Gln Lys Phe Val Leu Gln Leu Leu Glu Leu Phe Asp Ser Glu Asp Pro
 165 170 175
 Arg Glu Arg Asp Phe Leu Lys Thr Thr Leu His Arg Ile Tyr Gly Lys
 180 185 190
 Phe Leu Gly Leu Arg Ala Tyr Ile Arg Lys Gln Ile Asn Asn Ile Phe
 195 200 205
 Tyr Arg Phe Ile Tyr Glu Thr Glu His His Asn Gly Ile Ala Glu Leu
 210 215 220
 Leu Glu Ile Leu Gly Ser Ile Ile Asn Gly Phe Ala Leu Pro Leu Lys
 225 230 235 240
 Glu Glu His Lys Ile Phe Leu Leu Lys Val Leu Leu Pro Leu His Lys
 245 250 255
 Val Lys Ser Leu Ser Val Tyr His Pro Gln Leu Ala Tyr Cys Val Val
 260 265 270
 Gln Phe Leu Glu Lys Asp Ser Thr Leu Thr Glu Pro Val Val Met Ala
 275 280 285
 Leu Leu Lys Tyr Trp Pro Lys Thr His Ser Pro Lys Glu Val Met Phe
 290 295 300
 Leu Asn Glu Leu Glu Glu Ile Leu Asp Val Ile Glu Pro Ser Glu Phe
 305 310 315 320
 Val Lys Ile Met Glu Pro Leu Phe Arg Gln Leu Ala Lys Cys Val Ser
 325 330 335
 Ser Pro His Phe Gln Val Ala Glu Arg Ala Leu Tyr Tyr Trp Asn Asn
 340 345 350
 Glu Tyr Ile Met Ser Leu Ile Ser Asp Asn Ala Ala Lys Ile Leu Pro
 355 360 365
 Ile Met Phe Pro Ser Leu Tyr Arg Asn Ser Lys Thr His Trp Asn Lys
 370 375 380
 Thr Ile His Gly Leu Ile Tyr Asn Ala Leu Lys Leu Phe Met Glu Met
 385 390 395 400
 Asn Gln Lys Leu Phe Asp Asp Cys Thr Gln Gln Phe Lys Ala Glu Lys
 405 410 415
 Leu Lys Glu Lys Leu Lys Met Lys Glu Arg Glu Glu Ala Trp Val Lys
 420 425 430
 Ile Glu Asn Leu Ala Lys Ala Asn Pro Gln Val Leu Lys Lys Arg Ile
 435 440 445
 Thr

<210> 147
 <211> 1580
 <212> DNA
 <213> Homo Sapiens

<400> 147
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 catgctccat cgccctggaa atttggtag cggcctccac ctaaacgact tactaggaa 180
 gctatgcgaa attattaaa agagcgaggg gatcaaacag tacttattct tcattaaaa 240
 gttgcacaga agtcatatgg aaatgaaaaa aggtttttt gcccacctcc ttgtgtatat 300
 cttatggca gcggatggaa gaaaaaaaaa gaacaaatgg aacgcgtatgg ttgttctgaa 360
 caagagtctc aaccgtgtgc atttattggg ataggaaaatc tgtgaccaaga aatgcagcag 420
 ctaaacttgg aaggaaagaa ctattgcaca gccaaaacat tgatataatc tgactcagac 480

aagcgaaagc acttcatttt ttctgtaaag atgttctatg gcaacagtga tgacatttgt	540
gtgttcctca gcaagcgat aaaagtcatc tccaaacccctt ccaaaaagaa gcagtcatttg	600
aaaaatgctg acttatgcat tgcctcagga acaaagggtgg ctctgtttaa tcgactacga	660
tcccagacag ttagtaccag atacttgcattt gtagaaggag gtaattttca tgccagttca	720
cagcagtggg gagcctttt tattcatctc ttggatgtatg atgaatcaga aggagaagaa	780
ttcacagatcc gagatgtcta catccattat ggacaaacat gcaaacttgt gtgctcattt	840
actggcatgg cactccaaag attgataattt atgaaagtgtg ataagcatac cgccatttttg	900
gatgcagatg atccctgtgtc acaactccat aaatgtgcattt acatgttaca ggatacagaa	960
agaatgtatt tgcctttc tcaagaaaga ataattcaat ttcaaggccac tccatgtcca	1020
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aaggcagagt atacattttt tgagggatg ggccctgtcc ttgcggcagt cactcctgtg	1140
cctgtgttag agagccttca gttgaatggc ggtggggacg tagcaatgtct tgaacttaca	1200
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atttatttcca ccagccttac ctttacctac acaccagaac cagggccacg gccacattgc	1440
agtgttagcag gagcaatcct tccagccaat tcaagccagg tgcccccataa cgaatcaaac	1500
acaaacagcg agggaaagttt cacaaacgcc agcacaattt caaccagtgt cacatcatct	1560
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<210> 148

<211> 500

<212> PRT

<213> Homo Sapiens

<400> 148

Met Asp His Thr Glu Gly Leu Pro Ala Glu Glu Pro Pro Ala His Ala	
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Arg Glu Ala Met Arg Asn Tyr Leu Lys Glu Arg Gly Asp Gln Thr Val	
35 40 45	
Leu Ile Leu His Ala Lys Val Ala Gln Lys Ser Tyr Gly Asn Glu Lys	
50 55 60	
Arg Phe Phe Cys Pro Pro Pro Cys Val Tyr Leu Met Gly Ser Gly Trp	
65 70 75 80	
Lys Lys Lys Glu Gln Met Glu Arg Asp Gly Cys Ser Glu Gln Glu	
85 90 95	
Ser Gln Pro Cys Ala Phe Ile Gly Ile Gly Asn Ser Asp Gln Glu Met	
100 105 110	
Gln Gln Leu Asn Leu Glu Gly Lys Asn Tyr Cys Thr Ala Lys Thr Leu	
115 120 125	
Tyr Ile Ser Asp Ser Asp Lys Arg Lys His Phe Ile Phe Ser Val Lys	
130 135 140	
Met Phe Tyr Gly Asn Ser Asp Asp Ile Gly Val Phe Leu Ser Lys Arg	
145 150 155 160	
Ile Lys Val Ile Ser Lys Pro Ser Lys Lys Gln Ser Leu Lys Asn	
165 170 175	
Ala Asp Leu Cys Ile Ala Ser Gly Thr Lys Val Ala Leu Phe Asn Arg	
180 185 190	
Leu Arg Ser Gln Thr Val Ser Thr Arg Tyr Leu His Val Glu Gly Gly	
195 200 205	
Asn Phe His Ala Ser Ser Gln Gln Trp Gly Ala Phe Phe Ile His Leu	
210 215 220	
Leu Asp Asp Asp Glu Ser Glu Gly Glu Phe Thr Val Arg Asp Val	

225	230	235	240
Tyr Ile His Tyr Gly Gln Thr Cys Lys Leu Val Cys Ser Val Thr Gly			
245	250	255	
Met Ala Leu Pro Arg Leu Ile Met Lys Val Asp Lys His Thr Ala			
260	265	270	
Leu Leu Asp Ala Asp Asp Pro Val Ser Gln Leu His Lys Cys Ala Phe			
275	280	285	
Tyr Leu Lys Asp Thr Glu Arg Met Tyr Leu Cys Leu Ser Gln Glu Arg			
290	295	300	
Ile Ile Gln Phe Gln Ala Thr Pro Cys Pro Lys Glu Pro Asn Lys Glu			
305	310	315	320
Met Ile Asn Asp Gly Ala Ser Trp Thr Ile Ile Ser Thr Asp Lys Ala			
325	330	335	
Glu Tyr Thr Phe Tyr Glu Gly Met Gly Pro Val Leu Ala Pro Val Thr			
340	345	350	
Pro Val Pro Val Val Glu Ser Leu Gln Leu Asn Gly Gly Asp Val			
355	360	365	
Ala Met Leu Glu Leu Thr Gly Gln Asn Phe Thr Pro Asn Leu Arg Val			
370	375	380	
Trp Phe Gly Asp Val Glu Ala Glu Thr Met Tyr Arg Cys Gly Glu Ser			
385	390	395	400
Met Leu Cys Val Val Pro Asp Ile Ser Ala Phe Arg Glu Gly Trp Arg			
405	410	415	
Trp Val Arg Gln Pro Val Gln Val Pro Val Thr Leu Val Arg Asn Asp			
420	425	430	
Gly Ile Ile Tyr Ser Thr Ser Leu Thr Phe Thr Tyr Thr Pro Glu Pro			
435	440	445	
Gly Pro Arg Pro His Cys Ser Val Ala Gly Ala Ile Leu Pro Ala Asn			
450	455	460	
Ser Ser Gln Val Pro Pro Asn Glu Ser Asn Thr Asn Ser Glu Gly Ser			
465	470	475	480
Tyr Thr Asn Ala Ser Thr Asn Ser Thr Ser Val Thr Ser Ser Thr Ala			
485	490	495	
Thr Val Val Ser			
500			

<210> 149
 <211> 1248
 <212> DNA
 <213> Homo Sapiens

<400> 149	
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gacaaggagc ggttcgcgct ggttgtgcac cccggcacgg cacggctggg gagccggac	180
gaggagttct tccacaaggt ccggacaatt cgtcagacta ttgtcaaact gggaaataaa	240
gtccaggagt tgagaaaaca gcaggtcacc atcctggcca cgcccattcc cgaggagagc	300
atgaaggcagg agctgcagaa cctgcgcgat gagatcaaac agctggggag ggagatccgc	360
ctgcagctga aggccataga gccccagaag gagaaagctg atgagaacta taactccgtc	420
aacacaagaa tgagaaaaac ccagcatggg gtcctgtccc agcaattcgt ggagctcatc	480
aacaagtgc attcaatgca gtccgaatac cgggagaaga acgtggagcg gattcggagg	540
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agtggggaaa gcgagggtgt tgtgtccat atcctaagg acacgcaggt gactcgacag	660
gccttaatg agatctcgcc cccgcacagt gagatccagc agcttgaacg cagtagtcgt	720
gagctgcacg acatattcac ttttctggct accgaagtgg agatgcaggg ggagatgatc	780

aatcgattt	agaagaacat	cctgagctca	gcggactacg	tggAACgtgg	gcaggaggcac	840
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tgtgtgtcca	tcaccgtcgt	cctccttagca	gtcatcattt	gcgtcacagt	ggttggataa	960
tgtcgcacat	tgttggcact	aggagcacca	ggaacccagg	gcctggcctt	ctctcccagc	1020
agcctgggg	gcaggcagag	cctccagtcg	gaccccttcc	tcacacactg	gcccctatgc	1080
agaagggcag	acagttcttc	tgggggttggc	agctgctcat	tcatgtatgc	ctcctccttc	1140
aggcctcaat	gcctggggga	ggcctgcact	gtcctgattt	gccgggacac	acggttttgt	1200
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<210> 150

<211> 297

<212> PRT

<213> Homo Sapiens

<400> 150

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Glu	Glu	Asp	Lys	Glu	Arg	Val	Ala	Leu	Val	Val	His	Pro	Gly	Thr	Ala
									25						30
Arg	Leu	Gly	Ser	Pro	Asp	Glu	Glu	Phe	Phe	His	Lys	Val	Arg	Thr	Ile
									40						45
Arg	Gln	Thr	Ile	Val	Lys	Leu	Gly	Asn	Lys	Val	Gln	Glu	Leu	Glu	Lys
									55						60
Gln	Gln	Val	Thr	Ile	Leu	Ala	Thr	Pro	Leu	Pro	Glu	Glu	Ser	Met	Lys
									70						80
Gln	Glu	Leu	Gln	Asn	Leu	Arg	Asp	Glu	Ile	Lys	Gln	Leu	Gly	Arg	Glu
									85						95
Ile	Arg	Leu	Gln	Leu	Lys	Ala	Ile	Glu	Pro	Gln	Lys	Glu	Glu	Ala	Asp
									100						110
Glu	Asn	Tyr	Asn	Ser	Val	Asn	Thr	Arg	Met	Arg	Lys	Thr	Gln	His	Gly
									115						125
Val	Leu	Ser	Gln	Gln	Phe	Val	Glu	Leu	Ile	Asn	Lys	Cys	Asn	Ser	Met
									130						140
Gln	Ser	Glu	Tyr	Arg	Glu	Lys	Asn	Val	Glu	Arg	Ile	Arg	Arg	Gln	Leu
									145						160
Lys	Ile	Thr	Asn	Ala	Gly	Met	Val	Ser	Asp	Glu	Glu	Leu	Asp	Gln	Met
									165						175
Leu	Asp	Ser	Gly	Gln	Ser	Glu	Val	Phe	Val	Ser	Asn	Ile	Leu	Lys	Asp
									180						190
Thr	Gln	Val	Thr	Arg	Gln	Ala	Leu	Asn	Glu	Ile	Ser	Ala	Arg	His	Ser
									195						205
Glu	Ile	Gln	Gln	Leu	Glu	Arg	Ser	Ile	Arg	Glu	Leu	His	Asp	Ile	Phe
									210						220
Thr	Phe	Leu	Ala	Thr	Glu	Val	Glu	Met	Gln	Gly	Glu	Met	Ile	Asn	Arg
									225						240
Ile	Glu	Lys	Asn	Ile	Leu	Ser	Ser	Ala	Asp	Tyr	Val	Glu	Arg	Gly	Gln
									245						255
Glu	His	Val	Lys	Thr	Ala	Leu	Glu	Asn	Gln	Lys	Lys	Val	Arg	Lys	Lys
									260						270
Lys	Val	Leu	Ile	Ala	Ile	Cys	Val	Ser	Ile	Thr	Val	Val	Leu	Leu	Ala
									275						285
Val	Ile	Ile	Gly	Val	Thr	Val	Val	Gly							
								290							295

<210> 151

<211> 1953

<212> DNA

<213> Homo Sapiens

<400> 151

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ccaaacctgcc	ggccatggag	accccgtccc	agcggcgccg	cacccgcagc	ggggcgccagg	180
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aggagctcaa	tgatcgcttg	gcccgttaca	tcgaccgtgt	gcgctcgctg	aaaacggaga	300
acgcagggct	gcccgttcgc	atcaccgagt	ctgaagaggt	ggtcagccgc	gagggtgtccg	360
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tgaaaagcgcg	caataccaag	aaggagggtg	acctgtatgc	tgctcaggct	cggtcgaaagg	540
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gcacgctgga	ggggcagctg	catgatctgc	ggggccaggt	ggccaagctt	gaggcagccc	660
taggtgaggc	caagaagcaa	cttcaggatg	agatgctgcg	gccccgtggat	gctgagaaca	720
ggtcgac	catgaaggag	gaactggact	tccagaagaa	catctacagt	gaggagctgc	780
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agtttgagag	ccggctggcg	gatgcgtgc	aggaactgcg	ggcccagcat	gaggaccagg	900
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agtctgtga	gaggaacagc	aacctggtgg	gggctgccc	cgaggagctg	cagcagtgc	1020
gcatccgcat	cgacagcctc	tctgccc	tcagccagct	ccagaagcag	ctggcagccca	1080
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tggacgagta	ccaggagctt	ctggacatca	agctggccct	ggacatggag	atccacgcct	1260
accgcaagct	cttggagggc	gaggagggaa	ggctacgcct	gtccccc	cctacctcgc	1320
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caaaaaagcg	caaactggag	tccactgaga	gccgcagca	tttctcacag	cacgcacgca	1440
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acaagtccaa	tgaggaccag	tccatggca	attggcagat	caagcgcag	aatggagatg	1560
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cgatctggc	tgcaggagct	ggggccaccc	acagcccccc	tacccaccc	gtgtgaaagg	1680
cacagaacac	ctggggctgc	gggaacagcc	tgcgtacggc	tctcatcaac	tccactgggg	1740
aagaagtggc	catgcgaag	ctggtgcgt	cagtgtactgt	ggttgaggac	gacgaggatg	1800
aggatggaga	tgacctgctc	catcaccacc	acgtgagtgg	tagccgcgc	tgaggccgag	1860
cctgcactgg	ggccaccaggc	caggctggg	ggcagcctct	ccccagcctc	cccgtgc	1920
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<210> 152

<211> 572

<212> PRT

<213> Homo Sapiens

<400> 152

Met	Glu	Thr	Pro	Ser	Gln	Arg	Arg	Ala	Thr	Arg	Ser	Gly	Ala	Gln	Ala
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Ser	Ser	Thr	Pro	Leu	Ser	Pro	Thr	Arg	Ile	Thr	Arg	Leu	Gln	Glu	Lys
						20			25					30	
Glu	Asp	Leu	Gln	Glu	Leu	Asn	Asp	Arg	Leu	Ala	Val	Tyr	Ile	Asp	Arg
						35			40					45	
Val	Arg	Ser	Leu	Glu	Thr	Glu	Asn	Ala	Gly	Leu	Arg	Leu	Arg	Ile	Thr
						50			55					60	
Glu	Ser	Glu	Glu	Val	Val	Ser	Arg	Glu	Val	Ser	Gly	Ile	Lys	Ala	Ala
						65			70					75	
														80	

Tyr Glu Ala Glu Leu Gly Asp Ala Arg Lys Thr Leu Asp Ser Val Ala
 85 90 95
 Lys Glu Arg Ala Arg Leu Gln Leu Glu Leu Ser Lys Val Arg Glu Glu
 100 105 110
 Phe Lys Glu Leu Lys Ala Arg Asn Thr Lys Lys Glu Gly Asp Leu Ile
 115 120 125
 Ala Ala Gln Ala Arg Leu Lys Asp Leu Glu Ala Leu Leu Asn Ser Lys
 130 135 140
 Glu Ala Ala Leu Ser Thr Ala Leu Ser Glu Lys Arg Thr Leu Glu Gly
 145 150 155 160
 Glu Leu His Asp Leu Arg Gly Gln Val Ala Lys Leu Glu Ala Ala Leu
 165 170 175
 Gly Glu Ala Lys Lys Gln Leu Gln Asp Glu Met Leu Arg Arg Val Asp
 180 185 190
 Ala Glu Asn Arg Leu Gln Thr Met Lys Glu Glu Leu Asp Phe Gln Lys
 195 200 205
 Asn Ile Tyr Ser Glu Glu Leu Arg Glu Thr Lys Arg Arg His Glu Thr
 210 215 220
 Arg Leu Val Glu Ile Asp Asn Gly Lys Gln Arg Glu Phe Glu Ser Arg
 225 230 235 240
 Leu Ala Asp Ala Leu Gln Glu Leu Arg Ala Gln His Glu Asp Gln Val
 245 250 255
 Glu Gln Tyr Lys Lys Glu Leu Glu Lys Thr Tyr Ser Ala Lys Leu Asp
 260 265 270
 Asn Ala Arg Gln Ser Ala Glu Arg Asn Ser Asn Leu Val Gly Ala Ala
 275 280 285
 His Glu Glu Leu Gln Gln Ser Arg Ile Arg Ile Asp Ser Leu Ser Ala
 290 295 300
 Gln Leu Ser Gln Leu Gln Lys Gln Leu Ala Ala Lys Glu Ala Lys Leu
 305 310 315 320
 Arg Asp Leu Glu Asp Ser Leu Ala Arg Glu Arg Asp Thr Ser Arg Arg
 325 330 335
 Leu Leu Ala Glu Lys Glu Arg Glu Met Ala Glu Met Arg Ala Arg Met
 340 345 350
 Gln Gln Gln Leu Asp Glu Tyr Gln Glu Leu Leu Asp Ile Lys Leu Ala
 355 360 365
 Leu Asp Met Glu Ile His Ala Tyr Arg Lys Leu Leu Glu Gly Glu Glu
 370 375 380
 Glu Arg Leu Arg Leu Ser Pro Ser Pro Thr Ser Gln Arg Ser Arg Gly
 385 390 395 400
 Arg Ala Ser Ser His Ser Ser Gln Thr Gln Gly Gly Ser Val Thr
 405 410 415
 Lys Lys Arg Lys Leu Glu Ser Thr Glu Ser Arg Ser Ser Phe Ser Gln
 420 425 430
 His Ala Arg Thr Ser Gly Arg Val Ala Val Glu Glu Val Asp Glu Glu
 435 440 445
 Gly Lys Phe Val Arg Leu Arg Asn Lys Ser Asn Glu Asp Gln Ser Met
 450 455 460
 Gly Asn Trp Gln Ile Lys Arg Gln Asn Gly Asp Asp Pro Leu Leu Thr
 465 470 475 480
 Tyr Arg Phe Pro Pro Lys Phe Thr Leu Lys Ala Gly Gln Val Val Thr
 485 490 495
 Ile Trp Ala Ala Gly Ala Gly Ala Thr His Ser Pro Pro Thr Asp Leu
 500 505 510
 Val Trp Lys Ala Gln Asn Thr Trp Gly Cys Gly Asn Ser Leu Arg Thr

515	520	525
Ala Leu Ile Asn Ser Thr Gly Glu Glu Val Ala Met Arg Lys Leu Val		
530	535	540
Arg Ser Val Thr Val Val Glu Asp Asp Glu Asp Glu Asp Gly Asp Asp		
545	550	555
Leu Leu His His His Val Ser Gly Ser Arg Arg		
565	570	

<210> 153
<211> 1610
<212> DNA
<213> Homo Sapiens

<400> 153	
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cgggccttgc tgaaaatgtg taagcaggat cccgagcgttc tgtacaccga gggaaatgcgc	180
ttcctgaggg agtggggtgga gggcataggt ggttaaagtac cacctgtac tcagaaagct	240
atatcagaag aaaataccaa ggaagaaaaaa cctgtatgtg agaagggtgga ggaagactta	300
aaggcagacg aaccatcaag tgaggaaagt gatctagaaa ttgataaaga aggtgtgatt	360
gaaccagaca ctgtatgtcc tcaagaaaatg ggagatgaaa atgcggagat aacggaggag	420
atgtggatc aggcaaatga taaaaaagtg gctgttattt aaggcctaaa tgatggtaa	480
ctccagaaaag ccattgtactt attcacagat gccatcaagc tgaatcctcg cttggccatt	540
ttgtatgcc aaggggcccag tgtcttcgtc aaattacaga agccaaatgc tgccatccga	600
gactgtgaca gagccattga aataatccct gattcagctc agccttacaa gtggcggggg	660
aaagcacaca gacttctagg ccactggaa gaagcagccc atgatcttgc ccttgcctgt	720
aaattggatt atgatgaaga tgcttagtgc atgctgaaag aagttcaacc tagggcacag	780
aaaattgcag aacatcgagaa aaagtatgag cgaaaacgtg aagagcgaga gatcaaagaa	840
agaatagaac gagttaaagaa ggctcgagaa gggcatgaga gagcccagag ggaggaagaa	900
gccagacac agtcaggagc tcagtatggc tctttccag gtggcttcc tggggaaatg	960
cctggtaatt ttcccggagg aatgccttgc atgggagggg gcatgcctgg aatggcttgc	1020
atgcctggac tcaatgaaat tcttagtgc ccagagggtc ttgcagccat gcaggatcca	1080
gaagttatgg tggcttcca ggtatggct cagaacccag caaatatgtc aaaataccag	1140
agcaacccaa aggttatgaa tctcatcagt aaattgtcag ccaaatttgg aggtcaagcg	1200
taatgtcattt ctgataaata aagcccttgc tgaaggaaaa gcaacctaga tcacctttag	1260
gatgtcgcaa taatacaaacc cagtgtaccc ctgacccctt catcaagaga gctgggggtgc	1320
tttgaagata atccctaccc ctctccccca aatgcagctg aagcattttt cagtggtttg	1380
ccatttagggt attcatttcgt ataatgttt cctacttagga attacaaact ttaaacactt	1440
ttaaatctt caaaatattt aaaacaaatt taaaggcct gtttatttctt atattttctt	1500
ttactaatca ttttgattt tttcttgc attattggca gggaaatatac ttatgtatgg	1560
aagattactg ctctgagtga aataaaagtt attagtgcga ggcaaacata	1610

<210> 154
<211> 369
<212> PRT
<213> Homo Sapiens

<400> 154			
Met Asp Pro Arg Lys Val Asn Glu Leu Arg Ala Phe Val Lys Met Cys			
1	5	10	15
Lys Gln Asp Pro Ser Val Leu Tyr Thr Glu Glu Met Arg Phe Leu Arg			
20	25	30	
Glu Trp Val Glu Ser Ile Gly Gly Lys Val Pro Pro Ala Thr Gln Lys			
35	40	45	
Ala Ile Ser Glu Glu Asn Thr Lys Glu Glu Lys Pro Asp Ser Lys Lys			

50	55	60
Val Glu Glu Asp Leu Lys Ala Asp Glu Pro Ser Ser Glu Glu Ser Asp		
65	70	75
Leu Glu Ile Asp Lys Glu Gly Val Ile Glu Pro Asp Thr Asp Ala Pro		80
85	90	95
Gln Glu Met Gly Asp Glu Asn Ala Glu Ile Thr Glu Glu Met Met Asp		
100	105	110
Gln Ala Asn Asp Lys Lys Val Ala Ala Ile Glu Ala Leu Asn Asp Gly		
115	120	125
Glu Leu Gln Lys Ala Ile Asp Leu Phe Thr Asp Ala Ile Lys Leu Asn		
130	135	140
Pro Arg Leu Ala Ile Leu Tyr Ala Lys Arg Ala Ser Val Phe Val Lys		
145	150	155
Leu Gln Lys Pro Asn Ala Ala Ile Arg Asp Cys Asp Arg Ala Ile Glu		160
165	170	175
Ile Asn Pro Asp Ser Ala Gln Pro Tyr Lys Trp Arg Gly Lys Ala His		
180	185	190
Arg Leu Leu Gly His Trp Glu Glu Ala Ala His Asp Leu Ala Leu Ala		
195	200	205
Cys Lys Leu Asp Tyr Asp Glu Asp Ala Ser Ala Met Leu Lys Glu Val		
210	215	220
Gln Pro Arg Ala Gln Lys Ile Ala Glu His Arg Arg Lys Tyr Glu Arg		
225	230	235
Lys Arg Glu Glu Arg Glu Ile Lys Glu Arg Ile Glu Arg Val Lys Lys		240
245	250	255
Ala Arg Glu Glu His Glu Arg Ala Gln Arg Glu Glu Glu Ala Arg Arg		
260	265	270
Gln Ser Gly Ala Gln Tyr Gly Ser Phe Pro Gly Gly Phe Pro Gly Gly		
275	280	285
Met Pro Gly Asn Phe Pro Gly Gly Met Pro Gly Met Gly Gly Gly Met		
290	295	300
Pro Gly Met Ala Gly Met Pro Gly Leu Asn Glu Ile Leu Ser Asp Pro		
305	310	315
Glu Val Leu Ala Ala Met Gln Asp Pro Glu Val Met Val Ala Phe Gln		320
325	330	335
Asp Val Ala Gln Asn Pro Ala Asn Met Ser Lys Tyr Gln Ser Asn Pro		
340	345	350
Lys Val Met Asn Leu Ile Ser Lys Leu Ser Ala Lys Phe Gly Gly Gln		
355	360	365
Ala		

<210> 155
<211> 1323
<212> DNA
<213> Homo Sapiens

<400> 155

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cagaaaaagat ggaaaaaaagg acatgtgcac tctgccccaa agatgtcgaa tataatgtcc	180
tgtactttgc acaatcagag aatatacgctg ctcatgagaa ttgtttgctg tattcttcag	240
gacttgtgga atgtgaggat caggatccac ttaatcctga tagaagttt gatgtggaat	300
cagtaaaagaa agaaaatccag agaggaagga agttgaaatg caaattttgt cataaaaagag	360
gagccaccgt gggatgtgat ttaaaaaact gtaacaagaa ttaccactt ttctgtgcc	420

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agaaggacga	cgcagttcca	cagtctgatg	gagttcgagg	aatttataaa	ctgcttgcc	480
agcaacatgc	tcaattcccc	atcatcgctc	aaagtgcataa	atttcagga	gtgaaaagaa	540
aaagaggaag	gaagaaaccc	ctctcaggca	atcatgtaca	gccaccgaa	acaatgaaat	600
gtaatacatt	cataagacaa	gtgaaagaag	agcatggcag	acacacagat	gcaactgtga	660
aagttcctt	tcttaagaaa	tgcaagggaa	gcaggacttc	ttaattactt	acttgaagaa	720
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gaaggaagag	attgagctac	ttcaggactt	aaaacaaacc	ttgtgcttct	tcagaagaaa	960
tagagatctt	atgtcaagtt	ctacatcaat	atcatccctg	tcttattagg	gattaccatt	1020
tcctaaagcca	agagtcatgt	caaattgcaa	tcaggctcaa	aaccagagac	caggctgtga	1080
aatccacaca	tctttagaac	tagtcgtctc	ctcttggcct	cagcagctct	tccctgttct	1140
tactggttga	cattttgatc	actcttgca	cactcttgc	ttttttgctc	actgtcacac	1200
tcccagcacc	tagtatgctc	agtaaatgtt	tggttgcataaa	gtgcataaaaa	tgttcttaac	1260
ctttgattct	acttacagcc	catgatagcc	tcttagatat	aataaatttg	gattatacta	1320
aaa						1323

<210> 156

<211> 191

<212> PRT

<213> Homo Sapiens

<400> 156

Met	Glu	Lys	Arg	Thr	Cys	Ala	Leu	Cys	Pro	Lys	Asp	Val	Glu	Tyr	Asn
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Val	Leu	Tyr	Phe	Ala	Gln	Ser	Glu	Asn	Ile	Ala	Ala	His	Glu	Asn	Cys
						20			25						30
Leu	Leu	Tyr	Ser	Ser	Gly	Leu	Val	Glu	Cys	Glu	Asp	Gln	Asp	Pro	Leu
						35			40						45
Asn	Pro	Asp	Arg	Ser	Phe	Asp	Val	Glu	Ser	Val	Lys	Lys	Glu	Ile	Gln
						50			55						60
Arg	Gly	Arg	Lys	Leu	Lys	Cys	Lys	Phe	Cys	His	Lys	Arg	Gly	Ala	Thr
						65			70						80
Val	Gly	Cys	Asp	Leu	Lys	Asn	Cys	Asn	Lys	Asn	Tyr	His	Phe	Phe	Cys
						85			90						95
Ala	Lys	Lys	Asp	Asp	Ala	Val	Pro	Gln	Ser	Asp	Gly	Val	Arg	Gly	Ile
						100			105						110
Tyr	Lys	Leu	Leu	Cys	Gln	Gln	His	Ala	Gln	Phe	Pro	Ile	Ile	Ala	Gln
						115			120						125
Ser	Ala	Lys	Phe	Ser	Gly	Val	Lys	Arg	Lys	Arg	Gly	Arg	Lys	Lys	Pro
						130			135						140
Leu	Ser	Gly	Asn	His	Val	Gln	Pro	Pro	Glu	Thr	Met	Lys	Cys	Asn	Thr
						145			150						160
Phe	Ile	Arg	Gln	Val	Lys	Glu	Glu	His	Gly	Arg	His	Thr	Asp	Ala	Thr
						165			170						175
Val	Lys	Val	Pro	Phe	Leu	Lys	Cys	Lys	Gly	Ser	Arg	Thr	Ser		
						180			185						190

<210> 157

<211> 4065

<212> DNA

<213> Homo Sapiens

<400> 157

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60

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ttggattttc	ctgccttaag	aaaaaacaaa	aatattgaca	acttttaag	cagatataaa	180
gacacaataa	ataaaatcg	agatttacga	atgaaagctg	aagattatga	agttagtgaag	240
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ttctggaaag	aaagggacat	catggctttt	gccaaacagtc	cttgggttgt	ttagctttt	420
tatgcattcc	aagatgatcg	ttatctctac	atggtgatgg	aatacatgcc	tggtagagat	480
cttgtaaact	taatgagcaa	ctatgatgtg	cctgaaaat	gggcacgatt	ctatactgca	540
gaagtagttc	ttgcattgga	tgcaatccat	tccatgggtt	ttattcacag	agatgtgaag	600
cctgataaaca	tgctgctgga	taaatctgga	catttgaagt	tagcagattt	tggtagttgt	660
atgaagatga	ataaggaagg	catggtacga	tgtgatacag	cggttggAAC	acctgattat	720
atttcccctg	aagtattaaa	atccccagg	ggtgatgggtt	attatggaa	agaatgtgac	780
tggtggtcgg	ttggggattt	tttatacgaa	atgcttgttag	gtgatacacc	tttttatgca	840
gattcttgg	ttggaactta	cagtaaaattt	atgaaccata	aaaattcaact	taccttcct	900
gatgataatg	acatatcaaa	agaagaaaaa	aaccttattt	gtgccttcct	tactgacagg	960
gaagtggaggt	tagggcggaa	tggtgtagaa	gaaatcaaac	gacatcttctt	cttcaaaaat	1020
gaccagtggg	cttgggaaac	gttccgagac	actgttagcac	cagttgtacc	cgatttaagt	1080
agtgacattt	atactagtaa	ttttgtatgac	ttggaagaag	ataaaggaga	ggaagaaaca	1140
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<210> 158
 <211> 1354
 <212> PRT
 <213> Homo Sapiens

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Gly Leu Asp Ala Leu Val Tyr Asp Leu Asp Phe Pro Ala Leu Arg Lys	
35 40 45	
Asn Lys Asn Ile Asp Asn Phe Leu Ser Arg Tyr Lys Asp Thr Ile Asn	
50 55 60	
Lys Ile Arg Asp Leu Arg Met Lys Ala Glu Asp Tyr Glu Val Val Lys	
65 70 75 80	
Val Ile Gly Arg Gly Ala Phe Gly Glu Val Gln Leu Val Arg His Lys	
85 90 95	
Ser Thr Arg Lys Val Tyr Ala Met Lys Leu Leu Ser Lys Phe Glu Met	
100 105 110	
Ile Lys Arg Ser Asp Ser Ala Phe Phe Trp Glu Glu Arg Asp Ile Met	
115 120 125	
Ala Phe Ala Asn Ser Pro Trp Val Val Gln Leu Phe Tyr Ala Phe Gln	
130 135 140	
Asp Asp Arg Tyr Leu Tyr Met Val Met Glu Tyr Met Pro Gly Gly Asp	
145 150 155 160	
Leu Val Asn Leu Met Ser Asn Tyr Asp Val Pro Glu Lys Trp Ala Arg	
165 170 175	
Phe Tyr Thr Ala Glu Val Val Leu Ala Leu Asp Ala Ile His Ser Met	
180 185 190	
Gly Phe Ile His Arg Asp Val Lys Pro Asp Asn Met Leu Leu Asp Lys	
195 200 205	
Ser Gly His Leu Lys Leu Ala Asp Phe Gly Thr Cys Met Lys Met Asn	
210 215 220	
Lys Glu Gly Met Val Arg Cys Asp Thr Ala Val Gly Thr Pro Asp Tyr	
225 230 235 240	
Ile Ser Pro Glu Val Leu Lys Ser Gln Gly Gly Asp Gly Tyr Tyr Gly	
245 250 255	
Arg Glu Cys Asp Trp Trp Ser Val Gly Val Phe Leu Tyr Glu Met Leu	
260 265 270	
Val Gly Asp Thr Pro Phe Tyr Ala Asp Ser Leu Val Gly Thr Tyr Ser	
275 280 285	

Lys Ile Met Asn His Lys Asn Ser Leu Thr Phe Pro Asp Asp Asn Asp
 290 295 300
 Ile Ser Lys Glu Ala Lys Asn Leu Ile Cys Ala Phe Leu Thr Asp Arg
 305 310 315 320
 Glu Val Arg Leu Gly Arg Asn Gly Val Glu Glu Ile Lys Arg His Leu
 325 330 335
 Phe Phe Lys Asn Asp Gln Trp Ala Trp Glu Thr Leu Arg Asp Thr Val
 340 345 350
 Ala Pro Val Val Pro Asp Leu Ser Ser Asp Ile Asp Thr Ser Asn Phe
 355 360 365
 Asp Asp Leu Glu Glu Asp Lys Gly Glu Glu Glu Thr Phe Pro Ile Pro
 370 375 380
 Lys Ala Phe Val Gly Asn Gln Leu Pro Phe Val Gly Phe Thr Tyr Tyr
 385 390 395 400
 Ser Asn Arg Arg Tyr Leu Ser Ser Ala Asn Pro Asn Asp Asn Arg Thr
 405 410 415
 Ser Ser Asn Ala Asp Lys Ser Leu Gln Glu Ser Leu Gln Lys Thr Ile
 420 425 430
 Tyr Lys Leu Glu Glu Gln Leu His Asn Glu Met Gln Leu Lys Asp Glu
 435 440 445
 Met Glu Gln Lys Cys Arg Thr Ser Asn Ile Lys Leu Asp Lys Ile Met
 450 455 460
 Lys Glu Leu Asp Glu Glu Gly Asn Gln Arg Arg Asn Leu Glu Ser Thr
 465 470 475 480
 Val Ser Gln Ile Glu Lys Glu Lys Met Leu Leu Gln His Arg Ile Asn
 485 490 495
 Glu Tyr Gln Arg Lys Ala Glu Gln Glu Asn Glu Lys Arg Arg Asn Val
 500 505 510
 Glu Asn Glu Val Ser Thr Leu Lys Asp Gln Leu Glu Asp Leu Lys Lys
 515 520 525
 Val Ser Gln Asn Ser Gln Leu Ala Asn Glu Lys Leu Ser Gln Leu Gln
 530 535 540
 Lys Gln Leu Glu Glu Ala Asn Asp Leu Leu Arg Thr Glu Ser Asp Thr
 545 550 555 560
 Ala Val Arg Leu Arg Lys Ser His Thr Glu Met Ser Lys Ser Ile Ser
 565 570 575
 Gln Leu Glu Ser Leu Asn Arg Glu Leu Gln Glu Arg Asn Arg Ile Leu
 580 585 590
 Glu Asn Ser Lys Ser Gln Thr Asp Lys Asp Tyr Tyr Gln Leu Gln Ala
 595 600 605
 Ile Leu Glu Ala Glu Arg Arg Asp Arg Gly His Asp Ser Glu Met Ile
 610 615 620
 Gly Asp Leu Gln Ala Arg Ile Thr Ser Leu Gln Glu Glu Val Lys His
 625 630 635 640
 Leu Lys His Asn Leu Glu Lys Val Glu Gly Glu Arg Lys Glu Ala Gln
 645 650 655
 Asp Met Leu Asn His Ser Glu Lys Glu Lys Asn Asn Leu Glu Ile Asp
 660 665 670
 Leu Asn Tyr Lys Leu Lys Ser Leu Gln Gln Arg Leu Glu Gln Glu Val
 675 680 685
 Asn Glu His Lys Val Thr Lys Ala Arg Leu Thr Asp Lys His Gln Ser
 690 695 700
 Ile Glu Glu Ala Lys Ser Val Ala Met Cys Glu Met Glu Lys Lys Leu
 705 710 715 720
 Lys Glu Glu Arg Glu Ala Arg Glu Lys Ala Glu Asn Arg Val Val Gln

725	730	735
Ile Glu Lys Gln Cys Ser Met Leu Asp Val Asp Leu Lys Gln Ser Gln		
740	745	750
Gln Lys Leu Glu His Leu Thr Gly Asn Lys Glu Arg Met Glu Asp Glu		
755	760	765
Val Lys Asn Leu Thr Leu Gln Leu Glu Gln Glu Ser Asn Lys Arg Leu		
770	775	780
Leu Leu Gln Asn Glu Leu Lys Thr Gln Ala Phe Glu Ala Asp Asn Leu		
785	790	795
Lys Gly Leu Glu Lys Gln Met Lys Gln Glu Ile Asn Thr Leu Leu Glu		
805	810	815
Ala Lys Arg Leu Leu Glu Phe Glu Leu Ala Gln Leu Thr Lys Gln Tyr		
820	825	830
Arg Gly Asn Glu Gly Gln Met Arg Glu Leu Gln Asp Gln Leu Glu Ala		
835	840	845
Glu Gln Tyr Phe Ser Thr Leu Tyr Lys Thr Gln Val Lys Glu Leu Lys		
850	855	860
Glu Glu Ile Glu Glu Lys Asn Arg Glu Asn Leu Lys Lys Ile Gln Glu		
865	870	875
Leu Gln Asn Glu Lys Glu Thr Leu Ala Thr Gln Leu Asp Leu Ala Glu		
885	890	895
Thr Lys Ala Glu Ser Glu Gln Leu Ala Arg Gly Leu Leu Glu Glu Gln		
900	905	910
Tyr Phe Glu Leu Thr Gln Glu Ser Lys Lys Ala Ala Ser Arg Asn Arg		
915	920	925
Gln Glu Ile Thr Asp Lys Asp His Thr Val Ser Arg Leu Glu Glu Ala		
930	935	940
Asn Ser Met Leu Thr Lys Asp Ile Glu Ile Leu Arg Arg Glu Asn Glu		
945	950	955
Glu Leu Thr Glu Lys Met Lys Lys Ala Glu Glu Glu Tyr Lys Leu Glu		
965	970	975
Lys Glu Glu Glu Ile Ser Asn Leu Lys Ala Ala Phe Glu Lys Asn Ile		
980	985	990
Asn Thr Glu Arg Thr Leu Lys Thr Gln Ala Val Asn Lys Leu Ala Glu		
995	1000	1005
Ile Met Asn Arg Lys Asp Phe Lys Ile Asp Arg Lys Lys Ala Asn Thr		
1010	1015	1020
Gln Asp Leu Arg Lys Lys Glu Lys Glu Asn Arg Lys Leu Gln Leu Glu		
1025	1030	1035
Leu Asn Gln Glu Arg Glu Lys Phe Asn Gln Met Val Val Lys His Gln		
1045	1050	1055
Lys Glu Leu Asn Asp Met Gln Ala Gln Leu Val Glu Glu Cys Ala His		
1060	1065	1070
Arg Asn Glu Leu Gln Met Gln Leu Ala Ser Lys Glu Ser Asp Ile Glu		
1075	1080	1085
Gln Leu Arg Ala Lys Leu Leu Asp Leu Ser Asp Ser Thr Ser Val Ala		
1090	1095	1100
Ser Phe Pro Ser Ala Asp Glu Thr Asp Gly Asn Leu Pro Glu Ser Arg		
1105	1110	1115
Ile Glu Gly Trp Leu Ser Val Pro Asn Arg Gly Asn Ile Lys Arg Tyr		
1125	1130	1135
Gly Trp Lys Lys Gln Tyr Val Val Ser Ser Lys Lys Ile Leu Phe		
1140	1145	1150
Tyr Asn Asp Glu Gln Asp Lys Glu Gln Ser Asn Pro Ser Met Val Leu		
1155	1160	1165

Asp Ile Asp Lys Leu Phe His Val Arg Pro Val Thr Gln Gly Asp Val
 1170 1175 1180
 Tyr Arg Ala Glu Thr Glu Glu Ile Pro Lys Ile Phe Gln Ile Leu Tyr
 1185 1190 1195 120
 Ala Asn Glu Gly Glu Cys Arg Lys Asp Val Glu Met Glu Pro Val Gln
 1205 1210 1215
 Gln Ala Glu Lys Thr Asn Phe Gln Asn His Lys Gly His Glu Phe Ile
 1220 1225 1230
 Pro Thr Leu Tyr His Phe Pro Ala Asn Cys Asp Ala Cys Ala Lys Pro
 1235 1240 1245
 Leu Trp His Val Phe Lys Pro Pro Pro Ala Leu Glu Cys Arg Arg Cys
 1250 1255 1260
 His Val Lys Cys His Arg Asp His Leu Asp Lys Lys Glu Asp Leu Ile
 1265 1270 1275 128
 Cys Pro Cys Lys Val Ser Tyr Asp Val Thr Ser Ala Arg Asp Met Leu
 1285 1290 1295
 Leu Leu Ala Cys Ser Gln Asp Glu Gln Lys Lys Trp Val Thr His Leu
 1300 1305 1310
 Val Lys Lys Ile Pro Lys Asn Pro Pro Ser Gly Phe Val Arg Ala Ser
 1315 1320 1325
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 1330 1335 1340
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 1345 1350

<210> 159
 <211> 683
 <212> DNA
 <213> Homo Sapiens

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 aggcaccggc atccccctggt gctggaaaacc cacctgggac cccaaaggga aagagagagc 180
 ttagtggagcaa tggcccaggt tccattattg gtgctaaagc tgggaagaat tctggcaaaa 240
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 cagctctggc gtcactcaaa gac 683

<210> 160
 <211> 227
 <212> PRT
 <213> Homo Sapiens

<400> 160
 Lys Leu Glu Phe Glu Pro Asp Ser Glu Asp Lys Ile Ser Asp Cys Glu
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 20 25 30
 Val Ser Ala Tyr Asp Gln Leu Lys Ala Pro Ala Ser Pro Gly Ala Gly

35	40	45
Asn Pro Pro Gly Thr Pro Lys Gly Lys Arg Glu Leu Met Ser Asn Gly		
50	55	60
Pro Gly Ser Ile Ile Gly Ala Lys Ala Gly Lys Asn Ser Gly Lys Lys		
65	70	75
Lys Gly Leu Asn Asn Glu Leu Asn Asn Leu Pro Val Ile Ser Asn Met		
85	90	95
Thr Ala Ala Leu Asp Ser Cys Ser Ala Ala Asp Gly Ser Leu Ala Ala		
100	105	110
Glu Met Pro Lys Leu Glu Ala Glu Gly Leu Ile Asp Lys Lys Asn Leu		
115	120	125
Gly Asp Lys Glu Lys Gly Lys Lys Ala Asn Asn Cys Lys Thr Asp Lys		
130	135	140
Asn Leu Ser Lys Leu Lys Ser Ala Arg Pro Ile Ala Pro Ala Pro Ala		
145	150	155
Pro Thr Pro Pro Gln Leu Ile Ala Ile Pro Thr Ala Thr Phe Thr Thr		
165	170	175
Thr Thr Thr Gly Thr Ile Pro Gly Leu Pro Ser Leu Thr Thr Thr Val		
180	185	190
Val Gln Ala Thr Pro Lys Ser Pro Pro Leu Lys Pro Ile Gln Pro Lys		
195	200	205
Pro Thr Ile Met Gly Glu Pro Ile Thr Val Asn Pro Ala Leu Val Ser		
210	215	220
Leu Lys Asp		
225		

<210> 161
 <211> 662
 <212> DNA
 <213> Homo Sapiens

<400> 161

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ttaacactca atgtacaaga ccggactgca cattctacca tcccaccatt aatgtcccac	480
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gcagaagatc atgcagtttgc aaggtttca tgtctgatga aagatctcta cagaacctgt	600
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aa	662

<210> 162

<211> 173

<212> PRT

<213> Homo Sapiens

<400> 162

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Glu	Lys	Leu	Leu	Glu	Arg	Cys	Lys	Tyr	Trp	Pro	Ala	Cys	Lys	Asn	Gly
35						40						45			
Asp	Glu	Cys	Ala	Tyr	His	His	Pro	Ile	Ser	Pro	Cys	Lys	Ala	Phe	Pro
50						55						60			
Asn	Cys	Lys	Phe	Ala	Glu	Lys	Cys	Leu	Phe	Val	His	Pro	Asn	Cys	Lys
65					70				75			80			
Tyr	Asp	Ala	Lys	Cys	Thr	Lys	Pro	Asp	Cys	Pro	Phe	Thr	His	Val	Ser
					85			90				95			
Arg	Arg	Ile	Pro	Val	Leu	Ser	Pro	Lys	Pro	Val	Ala	Pro	Pro	Ala	Pro
					100			105				110			
Pro	Ser	Ser	Ser	Gln	Leu	Cys	Arg	Tyr	Phe	Pro	Ala	Cys	Lys	Lys	Met
					115			120				125			
Glu	Cys	Pro	Phe	Tyr	His	Pro	Lys	His	Cys	Arg	Phe	Asn	Thr	Gln	Cys
					130			135			140				
Thr	Arg	Pro	Asp	Cys	Thr	Phe	Tyr	His	Pro	Thr	Ile	Asn	Val	Pro	Pro
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<210> 163
 <211> 2912
 <212> DNA
 <213> Homo Sapiens

<400> 163							
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gatgttaact	ttgtgtggtc	taaagtgttt	agctgtcaag	ccggatgcct	aagttagacca	2580
aatcttgtta	ttgaagtgtt	ctgagctgta	tcttgatgtt	tagaaaagta	ttcggttacat	2640
cttgttaggat	ctactttttt	aacttttcat	tccctgttagt	tgacaattct	gcatgtacta	2700
gtcctctaga	aataggttaa	actgaagcaa	cttggatggaa	ggatctctcc	acagggcttg	2760
ttttccaaag	aaaagtattt	tttggaggag	caaagttaaa	agcttaccta	agcatatcgt	2820
aaagctgttc	aaataactcga	gcccagtctt	gtggatggaa	atgttagtgc	cgagtcacat	2880
tctqcttaaa	gttgtaaaca	atacagatga	gt			2912

<210> 164

<211> 732

<212> PRT

<213> Homo Sapiens

<400> 164

Met	Pro	Glu	Glu	Thr	Gln	Thr	Gln	Asp	Gln	Pro	Met	Glu	Glu	Glu	
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Val	Glu	Thr	Phe	Ala	Phe	Gln	Ala	Glu	Ile	Ala	Gln	Leu	Met	Ser	Leu
					20				25				30		
Ile	Ile	Asn	Thr	Phe	Tyr	Ser	Asn	Lys	Glu	Ile	Phe	Leu	Arg	Glu	Leu
					35			40				45			
Ile	Ser	Asn	Ser	Ser	Asp	Ala	Leu	Asp	Lys	Ile	Arg	Tyr	Glu	Thr	Leu
					50			55				60			
Thr	Asp	Pro	Ser	Lys	Leu	Asp	Ser	Gly	Lys	Glu	Leu	His	Ile	Asn	Leu
					65			70			75			80	
Ile	Pro	Asn	Lys	Gln	Asp	Arg	Thr	Leu	Thr	Ile	Val	Asp	Thr	Gly	Ile
					85				90				95		
Gly	Met	Thr	Lys	Ala	Asp	Leu	Ile	Asn	Asn	Leu	Gly	Thr	Ile	Ala	Lys
					100				105				110		
Ser	Gly	Thr	Lys	Ala	Phe	Met	Glu	Ala	Leu	Gln	Ala	Gly	Ala	Asp	Ile
					115				120				125		
Ser	Met	Ile	Gly	Gln	Phe	Gly	Val	Gly	Phe	Tyr	Ser	Ala	Tyr	Leu	Val
					130			135				140			
Ala	Glu	Lys	Val	Thr	Val	Ile	Thr	Lys	His	Asn	Asp	Asp	Glu	Gln	Tyr
					145			150				155			160
Ala	Trp	Glu	Ser	Ser	Ala	Gly	Gly	Ser	Phe	Thr	Val	Arg	Thr	Asp	Thr
					165				170				175		
Gly	Glu	Pro	Met	Gly	Arg	Gly	Thr	Lys	Val	Ile	Leu	His	Leu	Lys	Glu
					180				185				190		
Asp	Gln	Thr	Glu	Tyr	Leu	Glu	Glu	Arg	Arg	Ile	Lys	Glu	Ile	Val	Lys
					195				200				205		
Lys	His	Ser	Gln	Phe	Ile	Gly	Tyr	Pro	Ile	Thr	Leu	Phe	Val	Glu	Lys
					210				215				220		
Glu	Arg	Asp	Lys	Glu	Val	Ser	Asp	Asp	Glu	Ala	Glu	Glu	Lys	Glu	Asp

225	230	235	240
Lys Glu Glu Glu Lys Glu Glu Glu Lys Glu Ser Glu Asp Lys Pro			
245	250	255	
Glu Ile Glu Asp Val Gly Ser Asp Glu Glu Glu Lys Lys Asp Gly			
260	265	270	
Asp Lys Lys Lys Lys Ile Lys Glu Lys Tyr Ile Asp Gln Glu			
275	280	285	
Glu Leu Asn Lys Thr Lys Pro Ile Trp Thr Arg Asn Pro Asp Asp Ile			
290	295	300	
Thr Asn Glu Glu Tyr Gly Glu Phe Tyr Lys Ser Leu Thr Asn Asp Trp			
305	310	315	320
Glu Asp His Leu Ala Val Lys His Phe Ser Val Glu Gly Gln Leu Glu			
325	330	335	
Phe Arg Ala Leu Leu Phe Val Pro Arg Arg Ala Pro Phe Asp Leu Phe			
340	345	350	
Glu Asn Arg Lys Lys Asn Ile Lys Leu Tyr Val Arg Arg Val			
355	360	365	
Phe Ile Met Asp Asn Cys Glu Glu Leu Ile Pro Glu Tyr Leu Asn Phe			
370	375	380	
Ile Arg Gly Val Val Asp Ser Glu Asp Leu Pro Leu Asn Ile Ser Arg			
385	390	395	400
Glu Met Leu Gln Gln Ser Lys Ile Leu Lys Val Ile Arg Lys Asn Leu			
405	410	415	
Val Lys Lys Cys Leu Glu Leu Phe Thr Glu Leu Ala Glu Asp Lys Glu			
420	425	430	
Asn Tyr Lys Lys Phe Tyr Glu Gln Phe Ser Lys Asn Ile Lys Leu Gly			
435	440	445	
Ile His Glu Asp Ser Gln Asn Arg Lys Lys Leu Ser Glu Leu Leu Arg			
450	455	460	
Tyr Tyr Thr Ser Ala Ser Gly Asp Glu Met Val Ser Leu Lys Asp Tyr			
465	470	475	480
Cys Thr Arg Met Lys Glu Asn Gln Lys His Ile Tyr Tyr Ile Thr Gly			
485	490	495	
Glu Thr Lys Asp Gln Val Ala Asn Ser Ala Phe Val Glu Arg Leu Arg			
500	505	510	
Lys His Gly Leu Glu Val Ile Tyr Met Ile Glu Pro Ile Asp Glu Tyr			
515	520	525	
Cys Val Gln Gln Leu Lys Glu Phe Glu Gly Lys Thr Leu Val Ser Val			
530	535	540	
Thr Lys Glu Gly Leu Glu Leu Pro Glu Asp Glu Glu Glu Lys Lys Lys			
545	550	555	560
Gln Glu Glu Lys Lys Thr Lys Phe Glu Asn Leu Cys Lys Ile Met Lys			
565	570	575	
Asp Ile Leu Glu Lys Lys Val Glu Lys Val Val Val Ser Asn Arg Leu			
580	585	590	
Val Thr Ser Pro Cys Cys Ile Val Thr Ser Thr Tyr Gly Trp Thr Ala			
595	600	605	
Asn Met Glu Arg Ile Met Lys Ala Gln Ala Leu Arg Asp Asn Ser Thr			
610	615	620	
Met Gly Tyr Met Ala Ala Lys Lys His Leu Glu Ile Asn Pro Asp His			
625	630	635	640
Ser Ile Ile Glu Thr Leu Arg Gln Lys Ala Glu Ala Asp Lys Asn Asp			
645	650	655	
Lys Ser Val Lys Asp Leu Val Ile Leu Leu Tyr Glu Thr Ala Leu Leu			
660	665	670	

Ser Ser Gly Phe Ser Leu Glu Asp Pro Gln Thr His Ala Asn Arg Ile
 675 680 685
 Tyr Arg Met Ile Lys Leu Gly Leu Gly Ile Asp Glu Asp Asp Pro Thr
 690 695 700
 Ala Asp Asp Thr Ser Ala Ala Val Thr Glu Glu Met Pro Pro Leu Glu
 705 710 715 720
 Gly Asp Asp Asp Thr Ser Arg Met Glu Glu Val Asp
 725 730

<210> 165
 <211> 790
 <212> DNA
 <213> Homo Sapiens

<400> 165

ccgactcaga aatggcggcc tccatgttct acggcaggct agtggccgtg gccacccttc	60
ggaaccaccc gcctcgacg gcccagcggg ctgctgctca ggttctggga agttctggat	120
tgtttaataa ccatggactc caagtacagc agcaacagca aaggaatctc tcactacatg	180
aatacatgag tatggaatta ttgcaagaag ctgggtgtctc cgttccaaa ggatatgtgg	240
caaagtcacc agatgaagct tatgcaattt ccaaaaaatt aggttcaaaa gatgtcgtga	300
taaaggcaca ggtttagct ggtggtagag gaaaaggaac atttgaaagt ggctcaaaag	360
gaggagtgaa gatagtttc tctccagaag aagcaaaagc tggttctca caaatgattg	420
ggaaaaaaatt gtttaccaag caaacgggag aaaagggcag aatatgcaat caagtattgg	480
tctgtgacg aaaatatccc aggagagaat actactttgc aataacaatg gaaaggcat	540
ttcaaggtcc tgtattaata ggaagttcac atgggtgtgt caacattgaa gatgttgctg	600
ctgagtctcc tgaagcaata attaaagaac ctattgatat tgaagaaggc atcaaaaagg	660
aacaagctct tcagcttgca cagaagaatg ggatttcccc taatattng ggaatcagca	720
gcaggaaaac atggtcaagc tttacagnn tttcttgaa atacgatgca acccttgata	780
ggaaattaaa	790

<210> 166
 <211> 259
 <212> PRT
 <213> Homo Sapiens

<400> 166

Asp Ser Glu Met Ala Ala Ser Met Phe Tyr Gly Arg Leu Val Ala Val	
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20 25 30	
Gln Val Leu Gly Ser Ser Gly Leu Phe Asn Asn His Gly Leu Gln Val	
35 40 45	
Gln Gln Gln Gln Arg Asn Leu Ser Leu His Glu Tyr Met Ser Met	
50 55 60	
Glu Leu Leu Gln Glu Ala Gly Val Ser Val Pro Lys Gly Tyr Val Ala	
65 70 75 80	
Lys Ser Pro Asp Glu Ala Tyr Ala Ile Ala Lys Lys Leu Gly Ser Lys	
85 90 95	
Asp Val Val Ile Lys Ala Gln Val Leu Ala Gly Gly Arg Gly Lys Gly	
100 105 110	
Thr Phe Glu Ser Gly Leu Lys Gly Gly Val Lys Ile Val Phe Ser Pro	
115 120 125	
Glu Glu Ala Lys Ala Val Ser Ser Gln Met Ile Gly Lys Lys Leu Phe	
130 135 140	
Thr Lys Gln Thr Gly Glu Lys Gly Arg Ile Cys Asn Gln Val Leu Val	

145	150	155	160
Cys	Glu	Arg	Lys
Tyr	Pro	Arg	Arg
Glu	Tyr	Tyr	Phe
			Ala
		Ile	Thr
			Met
165		170	175
Glu	Arg	Ser	Phe
Gln	Gly	Pro	Val
		Leu	Ile
		Gly	Ser
		Ser	His
			Gly
180		185	190
Val	Asn	Ile	Glu
		Asp	Val
		Ala	Ala
		Glu	Ser
		Pro	Glu
		Ala	Ile
		Ile	Lys
195		200	205
Glu	Pro	Ile	Asp
		Ile	Glu
		Glu	Gly
		Ile	Lys
		Lys	Glu
210		215	220
Leu	Ala	Gln	Lys
		Asn	Gly
		Ile	Ser
		Pro	Asn
		Ile	Gly
225		230	235
Lys	Thr	Trp	Ser
		Ser	Phe
		Phe	Thr
		Leu	Lys
			Tyr
			Asp
			Ala
			Thr
			Leu
245		250	255
Arg	Lys	Leu	

<210> 167
 <211> 5307
 <212> DNA
 <213> Homo Sapiens

<400> 167

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gagagtggac	gtaaagtgtt	ctcaactaac	aaattataac	tatgtgaggt	agtgcata	180
ttaagtagct	agatttggc	attccacaat	gtatatgtac	ttcaaaaacat	catgttgtac	240
atgagaaaaca	cagtttatac	tgttagtcag	ttttaaaaat	aaaaaatatt	ccaactagaa	300
actctgttgt	agttttgaa	attacaactt	ggaggcttt	aggaactgat	tagaagtctc	360
ctttctgttt	caggcttca	tatccaaacc	atagatctt	agaagtaaca	tctgttaatt	420
aattattaat	aaatagttt	agtctttatt	aattcatgga	taacttgacc	attttctctc	480
tccttttgc	tagataatcc	cagatcatgg	ccgggcacag	tagtcacgc	ctgtattccc	540
agcagtttgg	gaggccgagg	caggcagatc	acttgaactc	aggagttga	gaccagctt	600
ggcaacatgg	caaaaaccctg	tctctattaa	aaatacaaaa	attagctggg	catggtagt	660
catgcctgta	gtcccagcta	cctgggaggc	tgaggtggg	ggatcgctt	agcctggag	720
gttgaggctt	ctgtgcgcga	tgattgtcc	agtgtatcac	ccattgcact	ccagcctggg	780
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ccaaaaggtt	ttttcctttt	ttttttctc	tataaaattt	cccatttgg	ccaaatctag	900
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agttagctat	catttattaa	tagtttatt	tataagtatt	tagtttact	ctgttg	1020
ctattttat	ctaaaattag	ctaaagccaa	attactattt	ctaaaacat	atttttact	1080
tttttttttt	ttttaaat	tattaggtac	ttcttgcaag	ggatatgcat	tagcacata	1140
tcaagaaggg	gaagaaaaga	agcaaactt	tggtacatca	aataccagag	gatcaagacg	1200
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cagtcagtt	cagagatccc	caatatcaga	caattctggg	tgtgtatccc	caggtacac	1320
taatccatct	ttaagtgttc	cctcttcagc	tgagtcaagaa	aagcaaaca	gacaggctcc	1380
aaaacggaa	tctgtaaagaa	gaggaagaaa	accaccca	ctgaaaaa	aacttcggag	1440
ctctgtagct	gccctgaaa	aatcatttc	caatgattca	gtatgtt	aaacagcaga	1500
atctgacaca	tcacctgtgt	tagaaaaa	gaccaacca	gatgtat	gtatgtt	1560
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gcaaata	gaaagt	gaga	agcata	aaattat	acagaggaaa	1680
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ttcacaaatca	gaggtaa	aga	cagatgtat	tacagttcat	tttccaaat	1920
atgttaaca	tctgaa	aga	aagtgtacca	acctgtatct	tgccccctaa	1980

tgagaatgt	gagtcagtgg	ttaatgaaga	aaaaataaca	gagagttccc	tagtagaaat	2040
tactgaacat	aaagatttta	cactaaaaac	agaggagctt	atagagagcc	ccaagttaga	2100
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tgatccaaga	accagaaatc	cagaaaagtt	gaaagagtct	cattggaaag	aaaatagaaa	3420
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gccatttac	caaaaataaa	atatcacaa	ggaagaatat	aaagaaattt	tacggaaagc	4500
agtagataaa	gtttgtcata	gtaagagtgg	agaagttaat	tctactaaag	tggcaaatct	4560
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ggaagaacct	gtgtctactg	aaaaaaaaat	aggctgaaaat	ggggaaacgct	gtcaaggaca	4680
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ttagaaaactt	ctaagtgcac	tggttttcaa	agagatataat	ataatgcatt	tattctgtca	5040
ggttaaataa	taaagtatga	tctttatgt	tttttccctc	taattataga	aagttaaata	5100
atgttattacc	atgaaaaatg	tttctaatat	taaataagaac	atatcagttg	caaagttcct	5160
aatgtgtatt	tttaaaggcac	atatctgaat	aaattgccta	gatagaaaaaa	aaattatcac	5220
gagtaaaattt	tagtgttcaa	aacattgaaa	cactcttcac	ctattgtatg	accaaataaa	5280

ggttatgctg cttgttacgc gaaggcc

5307

<210> 168
 <211> 1148
 <212> PRT
 <213> Homo Sapiens

<400> 168
 Met Thr Thr Pro Thr Arg Arg Ser Thr Arg Asn Thr Arg Ala Glu Thr
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 Ala Ser Gln Ser Gln Arg Ser Pro Ile Ser Asp Asn Ser Gly Cys Asp
 20 25 30
 Ala Pro Gly Asn Ser Asn Pro Ser Leu Ser Val Pro Ser Ser Ala Glu
 35 40 45
 Ser Glu Lys Gln Thr Arg Gln Ala Pro Lys Arg Lys Ser Val Arg Arg
 50 55 60
 Gly Arg Lys Pro Pro Leu Leu Lys Lys Leu Arg Ser Ser Val Ala
 65 70 75 80
 Ala Pro Glu Lys Ser Ser Ser Asn Asp Ser Val Asp Glu Glu Thr Ala
 85 90 95
 Glu Ser Asp Thr Ser Pro Val Leu Glu Lys Glu His Gln Pro Asp Val
 100 105 110
 Asp Ser Ser Asn Ile Cys Thr Val Gln Thr His Val Glu Asn Gln Ser
 115 120 125
 Ala Asn Cys Leu Lys Ser Cys Asn Glu Gln Ile Glu Glu Ser Glu Lys
 130 135 140
 His Thr Ala Asn Tyr Asp Thr Glu Glu Arg Val Gly Ser Ser Ser
 145 150 155 160
 Glu Ser Cys Ala Gln Asp Leu Pro Val Leu Val Gly Glu Glu Gly Glu
 165 170 175
 Val Lys Lys Leu Glu Asn Thr Gly Ile Glu Ala Asn Val Leu Cys Leu
 180 185 190
 Glu Ser Glu Ile Ser Glu Asn Ile Leu Glu Lys Gly Gly Asp Pro Leu
 195 200 205
 Glu Lys Gln Asp Gln Ile Ser Gly Leu Ser Gln Ser Glu Val Lys Thr
 210 215 220
 Asp Val Cys Thr Val His Leu Pro Asn Asp Phe Pro Thr Cys Leu Thr
 225 230 235 240
 Ser Glu Ser Lys Val Tyr Gln Pro Val Ser Cys Pro Leu Ser Asp Leu
 245 250 255
 Ser Glu Asn Val Glu Ser Val Val Asn Glu Glu Lys Ile Thr Glu Ser
 260 265 270
 Ser Leu Val Glu Ile Thr Glu His Lys Asp Phe Thr Leu Lys Thr Glu
 275 280 285
 Glu Leu Ile Glu Ser Pro Lys Leu Glu Ser Ser Glu Gly Glu Ile Ile
 290 295 300
 Gln Thr Val Asp Arg Gln Ser Val Lys Ser Pro Glu Val Gln Leu Leu
 305 310 315 320
 Gly His Val Glu Thr Glu Asp Val Glu Ile Ile Ala Thr Cys Asp Thr
 325 330 335
 Phe Gly Asn Glu Asp Phe Asn Asn Ile Gln Asp Ser Glu Asn Asn Leu
 340 345 350
 Leu Lys Asn Asn Leu Leu Asn Thr Lys Leu Glu Lys Ser Leu Glu Glu

355	360	365
Lys Asn Glu Ser Leu Thr Glu His Pro Arg Ser Thr Glu	Leu Pro Lys	
370	375	380
Thr His Ile Glu Gln Ile Gln Lys His Phe Ser Glu Asp	Asn Asn Glu	
385	390	395
Met Ile Pro Met Glu Cys Asp Ser Phe Cys Ser Asp Gln	Asn Glu Ser	
405	410	415
Glu Val Glu Pro Ser Val Asn Ala Asp Leu Lys Gln Met	Asn Glu Asn	
420	425	430
Ser Val Thr His Cys Ser Glu Asn Asn Met Pro Ser Ser	Asp Leu Ala	
435	440	445
Asp Glu Lys Val Glu Thr Val Ser Gln Pro Ser Glu Ser	Pro Lys Asp	
450	455	460
Thr Ile Asp Lys Thr Lys Pro Arg Thr Arg Arg Ser Arg	Phe His	
465	470	475
Ser Pro Ser Thr Trp Ser Pro Asn Lys Asp Thr Pro Gln	Glu Lys	
485	490	495
Lys Arg Pro Gln Ser Pro Ser Pro Arg Arg Glu Thr Gly	Lys Glu Ser	
500	505	510
Arg Lys Ser Gln Ser Pro Ser Pro Lys Asn Glu Ser Ala	Arg Gly Arg	
515	520	525
Lys Lys Ser Arg Ser Gln Ser Pro Lys Lys Asp Ile Ala	Arg Glu Arg	
530	535	540
Arg Gln Ser Gln Ser Arg Ser Pro Lys Arg Asp Thr Thr	Arg Glu Ser	
545	550	555
Arg Arg Ser Glu Ser Leu Ser Pro Arg Arg Glu Thr Ser	Arg Glu Asn	
565	570	575
Lys Arg Ser Gln Pro Arg Val Lys Asp Ser Ser Pro Gly	Glu Lys Ser	
580	585	590
Arg Ser Gln Ser Arg Glu Arg Glu Ser Asp Arg Asp Gly	Gln Arg Arg	
595	600	605
Glu Arg Glu Arg Arg Thr Arg Lys Trp Ser Arg Ser Arg	Ser His Ser	
610	615	620
Arg Ser Pro Ser Arg Cys Arg Thr Lys Ser Lys Ser Ser	Ser Phe Gly	
625	630	635
Arg Ile Asp Arg Asp Ser Tyr Ser Pro Arg Trp Lys Gly	Arg Trp Ala	
645	650	655
Asn Asp Gly Trp Arg Cys Pro Arg Gly Asn Asp Arg Tyr	Arg Lys Asn	
660	665	670
Asp Pro Glu Lys Gln Asn Glu Asn Thr Arg Lys Glu Lys	Asn Asp Ile	
675	680	685
His Leu Asp Ala Asp Asp Pro Asn Ser Ala Asp Lys His	Arg Asn Asp	
690	695	700
Cys Pro Asn Trp Ile Thr Glu Lys Ile Asn Ser Gly Pro	Asp Pro Arg	
705	710	715
Thr Arg Asn Pro Glu Lys Leu Lys Glu Ser His Trp Glu	Glu Asn Arg	
725	730	735
Asn Glu Asn Ser Gly Asn Ser Trp Asn Lys Asn Phe Gly	Ser Gly Trp	
740	745	750
Val Ser Asn Arg Gly Arg Gly Asn Arg Gly Arg Gly	Thr Tyr	
755	760	765
Arg Ser Ser Phe Ala Tyr Lys Asp Gln Asn Glu Asn Arg	Trp Gln Asn	
770	775	780
Arg Lys Pro Leu Ser Gly Asn Ser Asn Ser Ser Gly Ser	Glu Ser Phe	
785	790	795
		800

Lys Phe Val Glu Gln Gln Ser Tyr Lys Arg Lys Ser Glu Gln Glu Phe
 805 810 815
 Ser Phe Asp Thr Pro Ala Asp Arg Ser Gly Trp Thr Ser Ala Ser Ser
 820 825 830
 Trp Ala Val Arg Lys Thr Leu Pro Ala Asp Val Gln Asn Tyr Tyr Ser
 835 840 845
 Arg Arg Gly Arg Asn Ser Ser Gly Pro Gln Ser Gly Trp Met Lys Gln
 850 855 860
 Glu Glu Glu Thr Ser Gly Gln Asp Ser Ser Leu Lys Asp Gln Thr Asn
 865 870 875 880
 Gln Gln Val Asp Gly Ser Gln Leu Pro Ile Asn Met Met Gln Pro Gln
 885 890 895
 Met Asn Val Met Gln Gln Met Asn Ala Gln His Gln Pro Met Asn
 900 905 910
 Ile Phe Pro Tyr Pro Val Gly Val His Ala Pro Leu Met Asn Ile Gln
 915 920 925
 Arg Asn Pro Phe Asn Ile His Pro Gln Leu Pro Leu His Leu His Thr
 930 935 940
 Gly Val Pro Leu Met Gln Val Ala Thr Pro Thr Ser Val Ser Gln Gly
 945 950 955 960
 Leu Pro Pro Pro Pro Pro Pro Pro Ser Gln Gln Val Asn Tyr
 965 970 975
 Ile Ala Ser Gln Pro Asp Gly Lys Gln Leu Gln Gly Ile Pro Ser Ser
 980 985 990
 Ser His Val Ser Asn Asn Met Ser Thr Pro Val Leu Pro Ala Pro Thr
 995 1000 1005
 Ala Ala Pro Gly Asn Thr Gly Met Val Gln Gly Pro Ser Ser Gly Asn
 1010 1015 1020
 Thr Ser Ser Ser His Ser Lys Ala Ser Asn Ala Ala Val Lys Leu
 1025 1030 1035 104
 Ala Glu Ser Lys Val Ser Val Ala Val Glu Ala Ser Ala Asp Ser Ser
 1045 1050 1055
 Lys Thr Asp Lys Lys Leu Gln Ile Gln Glu Lys Ala Ala Gln Glu Val
 1060 1065 1070
 Lys Leu Ala Ile Lys Pro Phe Tyr Gln Asn Lys Asp Ile Thr Lys Glu
 1075 1080 1085
 Glu Tyr Lys Glu Ile Val Arg Lys Ala Val Asp Lys Val Cys His Ser
 1090 1095 1100
 Lys Ser Gly Glu Val Asn Ser Thr Lys Val Ala Asn Leu Val Lys Ala
 1105 1110 1115 112
 Tyr Val Asp Lys Tyr Lys Tyr Ser Arg Lys Gly Ser Gln Lys Lys Thr
 1125 1130 1135
 Leu Glu Glu Pro Val Ser Thr Glu Lys Asn Ile Gly
 1140 1145

 <210> 169
 <211> 597
 <212> DNA
 <213> Homo Sapiens

 <400> 169
 gagactttta atcatctatc ctttgctt tacgcagacc ctacaataca ctagaggctt 60
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 gaagtgtac caaaaacacgc aatgactgtc cttaaagtc gttctggat acacctgtaa 180
 acttggatca agtccctcc cttctcctca aaatatatcc acttggctg aaagaaatca 240

cgaccgatgc tcacaattct gacctcgtaa ttatataggg ggtgggtttg gtttctgcgt	300
ctttcctga ttcagtggca ggtaacatat ttcatgtaca aaatgaactg caacaccacg	360
gcaaacaagg gacaggccct caaagttgtc ggttagggagc caggaccccg ccagtggcgt	420
ggggagacac cgtactaaac aagcttgc aaacgcaggca ctttcctgcc actgaggagg	480
aagggctggc taagggaggc cgccccggag gaagccaagg tctgcaggcc ctgacaaagt	540
cctccggcc tccacgcgtc gccatggcaa cgccccggct gtgctgcggc ggattgg	597

<210> 170

<211> 3344

<212> DNA

<213> Homo Sapiens

<400> 170

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ctctaacagc aagtggaaatc cggcagcgat ttatagattt cttcaagagg aacgagcata	180
cgtatgtca ctcgtctgcc accatccat tggatgaccc cactttgtc tttgccaatg	240
caggcatgaa ccagttaaa cccatttcc tgaacacaaat tgaccatct caccatgg	300
caaagctgag cagagctgcc aataccaga agtgcattcg ggctgggggc aaacaaaatg	360
acctggacga tggggcaag gatgttatac atcacaccc ttgcagatg ctggcttctt	420
ggtttttg agattactt aaggaattgg catgttgtt ggctctggaa ctccctacccc	480
aagagttgg cattccatt gaaagactt atgttactt ctttggcgaa gatgaagcag	540
ctggcttaga agcagatctg gaatgcaaac agatctggc aaatttgggg ctggatgaca	600
ccaaaatctt cccaggcaac atgaaggata acttctggg gatgggtgac acggccccc	660
gtggccttg cagttagatc cactacgacc ggattgggtt tcggacgccc gcacatctt	720
tcaaccagga cgaccctaat gtgctggaga tctggaaacct tggatgttcatc cagtataaca	780
ggaaagctga tggcattctg aaaccttcc ccaagaaaag cattgacaca gggatgggccc	840
tggAACGACT ggtatctgtc ctgcagaata agatgtccaa ctatgacact gaccttttg	900
tcccttactt tgaagccatt cagaaggca caggtgccc accatacact gggaaagttt	960
gtgctgagga tggcgttggg attgacatgg cttaccgggt gctggctgac catgctcgaa	1020
ccatcactgt ggcactggc gatgggtggc ggcctgacaa cacagggcgt ggatatgtgt	1080
tgagacggat tctccgccc gctgtccatc acgcccataa aaagctcaat gccagcaggg	1140
gcttcttgc tacgttagt gatgtgtcg tccagttccct gggagatgca ttccctgagc	1200
tgaagaagga cccagacatg gtgaaggaca tcttaatga agaagagggt cagttctca	1260
agactctcag cagagggcgt cgcattctgg acaggaaaat tcagagcctg ggagacagca	1320
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acgaaggcta cctgggtgaag gtggatgaca gcagtgaaga taaaacagag ttacagtga	1800
agaatgtca ggtccgagga gggtatgtgc tacacattgg aaccatctac ggtgacccat	1860
aagtggggaa tcaggtctgg ctgttatttgc atgagccccc acgaagaccc atcatgagca	1920
accacacagc tacgcacatt ctgaacttgc ccctgcgcgc agtgcattgg gaagctgacc	1980
agaaaaggctc attgggtgtc cctgaccgc tcagatttgc ttactgccc aaggagccca	2040
tgtccaccca acagatcaag aaggctgtca agattgtctaa tgagatgtt gaggcagcc	2100
aggccgtcta tacccaggat tggcccttgg cagcagcgaa agccatccag ggcctacggg	2160
ctgtgttgc tgagacctat cctgaccctg tgcgtgtcgt ctccattggg gtccctgg	2220
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ccattggccaa gggtatccgg aggattgtgg ctgtcacagg tgcggaggcc cagaaggccc	2400
tcagggaaagc agagagctt aagaaatgtc tctctgttcat ggaagccaaa gtgaaggc	2460
agactgtcc aaacaaggat gtgcagaggg agatgtcc tcttggagag gcccctggcca	2520

ctgcagtcat	cccccagtgg	cagaaggatg	aattgcggga	gactctcaa	tccctaaaga	2580
aggtcatgga	tgacttggac	cgagccagca	aagccgatgt	ccagaaaacga	gtgttagaga	2640
agacgaagca	gttcatcgac	agcaacccc	accagcctc	tgtcatcctg	gagatggaga	2700
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agacttctgc	catgtcttc	acggtgac	atgaggctgg	caagatcacg	tgcctgtgtc	2820
aagtcccca	gaatgcagcc	aatcggggt	taaaagccag	cgagtgggt	cagcagggtgt	2880
caggcttgc	ggacggtaaa	ggtgtggca	aggatgtgtc	tgcacaggcc	acaggcaaga	2940
acgttggctg	cctgcaggag	gcbcgtcagc	tggccacttc	cttcgcccag	ctgcgcctcg	3000
gggatgtaaa	gaactgagtg	gggaaggagg	aggctccac	tggatccatc	cgtccagcca	3060
agagcttcc	atctgctaca	agaacattt	aatcttggga	cctttaaaga	gccccctccta	3120
acccagcagt	aactggaaaca	cacttggag	cagtccatg	tctcagtgcc	ccttaaattt	3180
ctgccctgag	ccctccacgt	cagtccatc	ggtctagaac	cactaacc	gcattgctgt	3240
tgatcgtcac	gctcgcatct	atagataacg	gctctccaga	cctgagctt	ccgcgtcagc	3300
aagtaggaat	cgttttgct	gcagagaata	aaaggaccac	gtgc		3344

<210> 171
 <211> 1004
 <212> PRT
 <213> Homo Sapiens

<400> 171																
Tyr	Ser	Cys	Ala	Ser	Ala	Gly	Ile	Gly	Ala	Ala	Gly	Pro	Trp	Arg	Gly	
1				5					10				15			
Thr	Leu	Arg	Glu	Glu	Leu	Gly	Thr	Ala	Thr	Leu	Gly	Glu	Phe	Phe	Gly	
					20				25				30			
Val	Thr	Phe	Lys	Met	Asp	Ser	Thr	Leu	Thr	Ala	Ser	Glu	Ile	Arg	Gln	
					35				40				45			
Arg	Phe	Ile	Asp	Phe	Phe	Lys	Arg	Asn	Glu	His	Thr	Tyr	Val	His	Ser	
						50		55		60						
Ser	Ala	Thr	Ile	Pro	Leu	Asp	Asp	Pro	Thr	Leu	Leu	Phe	Ala	Asn	Ala	
					65			70		75			80			
Gly	Met	Asn	Gln	Phe	Lys	Pro	Ile	Phe	Leu	Asn	Thr	Ile	Asp	Pro	Ser	
					85				90				95			
His	Pro	Met	Ala	Lys	Leu	Ser	Arg	Ala	Ala	Asn	Thr	Gln	Lys	Cys	Ile	
					100				105				110			
Arg	Ala	Gly	Gly	Lys	Gln	Asn	Asp	Leu	Asp	Asp	Val	Gly	Lys	Asp	Val	
					115				120				125			
Tyr	His	His	Thr	Phe	Phe	Glu	Met	Leu	Gly	Ser	Trp	Ser	Phe	Gly	Asp	
					130				135				140			
Tyr	Phe	Lys	Glu	Leu	Ala	Cys	Lys	Met	Ala	Leu	Glu	Leu	Leu	Thr	Gln	
					145				150				155			160
Glu	Phe	Gly	Ile	Pro	Ile	Glu	Arg	Leu	Tyr	Val	Thr	Tyr	Phe	Gly	Gly	
					165				170				175			
Asp	Glu	Ala	Ala	Gly	Leu	Glu	Ala	Asp	Leu	Glu	Cys	Lys	Gln	Ile	Trp	
					180				185				190			
Gln	Asn	Leu	Gly	Leu	Asp	Asp	Thr	Lys	Ile	Leu	Pro	Gly	Asn	Met	Lys	
					195				200				205			
Asp	Asn	Phe	Trp	Glu	Met	Gly	Asp	Thr	Gly	Pro	Cys	Gly	Pro	Cys	Ser	
					210				215				220			
Glu	Ile	His	Tyr	Asp	Arg	Ile	Gly	Gly	Arg	Asp	Ala	Ala	His	Leu	Val	
					225				230				235			240
Asn	Gln	Asp	Asp	Pro	Asn	Val	Leu	Glu	Ile	Trp	Asn	Leu	Val	Phe	Ile	
					245				250				255			
Gln	Tyr	Asn	Arg	Glu	Ala	Asp	Gly	Ile	Leu	Lys	Pro	Leu	Pro	Lys	Lys	
					260				265				270			

Ser Ile Asp Thr Gly Met Gly Leu Glu Arg Leu Val Ser Val Leu Gln
 275 280 285
 Asn Lys Met Ser Asn Tyr Asp Thr Asp Leu Phe Val Pro Tyr Phe Glu
 290 295 300
 Ala Ile Gln Lys Gly Thr Gly Ala Arg Pro Tyr Thr Gly Lys Val Gly
 305 310 315 320
 Ala Glu Asp Ala Asp Gly Ile Asp Met Ala Tyr Arg Val Leu Ala Asp
 325 330 335
 His Ala Arg Thr Ile Thr Val Ala Leu Ala Asp Gly Gly Arg Pro Asp
 340 345 350
 Asn Thr Gly Arg Gly Tyr Val Leu Arg Arg Ile Leu Arg Arg Ala Val
 355 360 365
 Arg Tyr Ala His Glu Lys Leu Asn Ala Ser Arg Gly Phe Phe Ala Thr
 370 375 380
 Leu Val Asp Val Val Val Gln Ser Leu Gly Asp Ala Phe Pro Glu Leu
 385 390 395 400
 Lys Lys Asp Pro Asp Met Val Lys Asp Ile Ile Asn Glu Glu Val
 405 410 415
 Gln Phe Leu Lys Thr Leu Ser Arg Gly Arg Arg Ile Leu Asp Arg Lys
 420 425 430
 Ile Gln Ser Leu Gly Asp Ser Lys Thr Ile Pro Gly Asp Thr Ala Trp
 435 440 445
 Leu Leu Tyr Asp Thr Tyr Gly Phe Pro Val Asp Leu Thr Gly Leu Ile
 450 455 460
 Ala Glu Glu Lys Gly Leu Val Val Asp Met Asp Gly Phe Glu Glu Glu
 465 470 475 480
 Arg Lys Leu Ala Gln Leu Lys Ser Gln Gly Lys Gly Ala Gly Gly Glu
 485 490 495
 Asp Leu Ile Met Leu Asp Ile Tyr Ala Ile Glu Glu Leu Arg Ala Arg
 500 505 510
 Gly Leu Glu Val Thr Asp Asp Ser Pro Lys Tyr Asn Tyr His Leu Asp
 515 520 525
 Ser Ser Gly Ser Tyr Val Phe Glu Asn Thr Val Ala Thr Val Met Ala
 530 535 540
 Leu Arg Arg Glu Lys Met Phe Val Glu Glu Val Ser Thr Gly Gln Glu
 545 550 555 560
 Cys Gly Val Val Leu Asp Lys Thr Cys Phe Tyr Ala Glu Gln Gly Gly
 565 570 575
 Gln Ile Tyr Asp Glu Gly Tyr Leu Val Lys Val Asp Asp Ser Ser Glu
 580 585 590
 Asp Lys Thr Glu Phe Thr Val Lys Asn Ala Gln Val Arg Gly Gly Tyr
 595 600 605
 Val Leu His Ile Gly Thr Ile Tyr Gly Asp Leu Lys Val Gly Asp Gln
 610 615 620
 Val Trp Leu Phe Ile Asp Glu Pro Arg Arg Arg Pro Ile Met Ser Asn
 625 630 635 640
 His Thr Ala Thr His Ile Leu Asn Phe Ala Leu Arg Ser Val Leu Gly
 645 650 655
 Glu Ala Asp Gln Lys Gly Ser Leu Val Ala Pro Asp Arg Leu Arg Phe
 660 665 670
 Asp Phe Thr Ala Lys Gly Ala Met Ser Thr Gln Gln Ile Lys Lys Ala
 675 680 685
 Glu Glu Ile Ala Asn Glu Met Ile Glu Ala Ala Lys Ala Val Tyr Thr
 690 695 700
 Gln Asp Cys Pro Leu Ala Ala Lys Ala Ile Gln Gly Leu Arg Ala

705	710	715	720
Val Phe Asp Glu Thr Tyr Pro Asp Pro Val Arg Val Val Ser Ile Gly			
725	730	735	
Val Pro Val Ser Glu Leu Leu Asp Asp Pro Ser Gly Pro Ala Gly Ser			
740	745	750	
Leu Thr Ser Val Glu Phe Cys Gly Gly Thr His Leu Arg Asn Ser Ser			
755	760	765	
His Ala Gly Ala Phe Val Ile Val Thr Glu Glu Ala Ile Ala Lys Gly			
770	775	780	
Ile Arg Arg Ile Val Ala Val Thr Gly Ala Glu Ala Gln Lys Ala Leu			
785	790	795	800
Arg Lys Ala Glu Ser Leu Lys Lys Cys Leu Ser Val Met Glu Ala Lys			
805	810	815	
Val Lys Ala Gln Thr Ala Pro Asn Lys Asp Val Gln Arg Glu Ile Ala			
820	825	830	
Asp Leu Gly Glu Ala Leu Ala Thr Ala Val Ile Pro Gln Trp Gln Lys			
835	840	845	
Asp Glu Leu Arg Glu Thr Leu Lys Ser Leu Lys Lys Val Met Asp Asp			
850	855	860	
Leu Asp Arg Ala Ser Lys Ala Asp Val Gln Lys Arg Val Leu Glu Lys			
865	870	875	880
Thr Lys Gln Phe Ile Asp Ser Asn Pro Asn Gln Pro Leu Val Ile Leu			
885	890	895	
Glu Met Glu Ser Gly Ala Ser Ala Lys Ala Leu Asn Glu Ala Leu Lys			
900	905	910	
Leu Phe Lys Met His Ser Pro Gln Thr Ser Ala Met Leu Phe Thr Val			
915	920	925	
Asp Asn Glu Ala Gly Lys Ile Thr Cys Leu Cys Gln Val Pro Gln Asn			
930	935	940	
Ala Ala Asn Arg Gly Leu Lys Ala Ser Glu Trp Val Gln Gln Val Ser			
945	950	955	960
Gly Leu Met Asp Gly Lys Gly Gly Lys Asp Val Ser Ala Gln Ala			
965	970	975	
Thr Gly Lys Asn Val Gly Cys Leu Gln Glu Ala Leu Gln Leu Ala Thr			
980	985	990	
Ser Phe Ala Gln Leu Arg Leu Gly Asp Val Lys Asn			
995	1000		

<210> 172

<211> 659

<212> DNA

<213> Homo Sapiens

<400> 172

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gaaccaaccg agtcggatcc tgaccctaaa acctagtatt ttccacttgt tcataaatat	180
ggaaaaactca gattccaatg acaaaggaag tggtgatcatg tctgcagcac agcgcagaag	240
tcagatggac cgattggatc gagaagaagc tttctatcaa tttgtaaata acctgagtga	300
agaagattat aggcttatga gagataacaa tttgcttaggc acccccaggtg aaagtactga	360
ggaagagttt ctgagacgac tacagcaa at taaaagaaggc ccaccaccgc aaaactcaga	420
tgaaaataga ggaggagact cttcagatga tgtgtcta at ggtgactcta taatagactg	480
gcttaactct gtcagacaaa ctggaaatac aacaagaatg gggcaaagag gaaaccaatc	540
ttggagagca gtgagtcgga ctaatccaaa cagtgggtga tttcagattc agtttagaga	600
taaatgttaa cccgtaataa tgggagccaa aattcagaga atgaaaatga gccatctgc	659

<210> 173
<211> 192
<212> PRT
<213> Homo Sapiens

<400> 173

Pro	Glu	Gln	Arg	Leu	Arg	Ala	Gly	Ala	Gly	Leu	Glu	Ala	Gly	Leu	Asn
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Gln	Leu	Leu	Ile	Gly	Gly	Gly	Leu	Glu	Ser	Gly	Gly	Gln	Gly	Gly	Ala
			20					25							30
Glu	Gln	Pro	Arg	Arg	Arg	Arg	Pro	Asn	Gln	Pro	Ser	Arg	Ile	Leu	Thr
			35					40							45
Leu	Lys	Pro	Ser	Ile	Phe	His	Leu	Phe	Ile	Asn	Met	Glu	Asn	Ser	Asp
	50				55						60				
Ser	Asn	Asp	Lys	Gly	Ser	Gly	Asp	Gln	Ser	Ala	Ala	Gln	Arg	Arg	Ser
65				70					75						80
Gln	Met	Asp	Arg	Leu	Asp	Arg	Glu	Glu	Ala	Phe	Tyr	Gln	Phe	Val	Asn
				85					90						95
Asn	Leu	Ser	Glu	Glu	Asp	Tyr	Arg	Leu	Met	Arg	Asp	Asn	Asn	Leu	Leu
			100					105							110
Gly	Thr	Pro	Gly	Glu	Ser	Thr	Glu	Glu	Glu	Leu	Leu	Arg	Arg	Leu	Gln
			115					120							125
Gln	Ile	Lys	Glu	Gly	Pro	Pro	Pro	Gln	Asn	Ser	Asp	Glu	Asn	Arg	Gly
			130				135				140				
Gly	Asp	Ser	Ser	Asp	Asp	Val	Ser	Asn	Gly	Asp	Ser	Ile	Ile	Asp	Trp
145				150					155						160
Leu	Asn	Ser	Val	Arg	Gln	Thr	Gly	Asn	Thr	Thr	Arg	Ser	Gly	Gln	Arg
			165					170							175
Gly	Asn	Gln	Ser	Trp	Arg	Ala	Val	Ser	Arg	Thr	Asn	Pro	Asn	Ser	Gly
			180					185							190

<210> 174
<211> 610
<212> DNA
<213> Homo Sapiens

<400> 174

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caacccaaa	tctgccacag	agcagtcagg	aactggtata	cgatcagaga	gtgagacaga		180
gtccgaggcc	tcagaaatta	ctattcctcc	cagcaccccg	gcagttccac	aggctcccgt		240
ccagggggag	gactacggca	aaggtgtcat	cttctacctc	agggacaaag	tggcgttggg		300
gattgtgta	tggAACATCT	ttaaccgaat	gccaatagca	aggaagatca	ttaaggacgg		360
tgagcagcat	gaagatctca	atgaagttagc	caaactattc	aacattcata	aagactgaag		420
ccccacagt	gaattggcaa	accactgca	gccctgaga	ggaggtcgaa	tggtaaagg		480
agcattttt	tattcagcag	actttctctg	tgtatgatg	tgaatgatca	agtcctttgt		540
gaatattttc	aactatgttag	gtaaattctt	aatgttcnca	tagtcaaata	aattctgatt		600
cttctaaaaa							610

<210> 175
<211> 138
<212> PRT
<213> Homo Sapiens

<400> 175

Tyr Trp His Gln Ser Met Phe Trp Ser Asp Leu Gly Pro Asp Val Gly
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 Tyr Glu Ala Ile Gly Leu Val Asp Ser Ser Leu Pro Thr Val Gly Val
 20 25 30
 Phe Ala Lys Ala Thr Ala Gln Asp Asn Pro Lys Ser Ala Thr Glu Gln
 35 40 45
 Ser Gly Thr Gly Ile Arg Ser Glu Ser Glu Thr Glu Ser Glu Ala Ser
 50 55 60
 Glu Ile Thr Ile Pro Pro Ser Thr Pro Ala Val Pro Gln Ala Pro Val
 65 70 75 80
 Gln Gly Glu Asp Tyr Gly Lys Gly Val Ile Phe Tyr Leu Arg Asp Lys
 85 90 95
 Val Val Val Gly Ile Val Leu Trp Asn Ile Phe Asn Arg Met Pro Ile
 100 105 110
 Ala Arg Lys Ile Ile Lys Asp Gly Glu Gln His Glu Asp Leu Asn Glu
 115 120 125
 Val Ala Lys Leu Phe Asn Ile His Glu Asp
 130 135

<210> 176
<211> 805
<212> DNA
<213> Homo Sapiens

<400> 176
gggacagcca agtctgtgac ttgcacgtac tccccctgcc tcaacaagat gttttgccaa 60
ctggccaaga cctgcccgtgt gcagctgtgg gttgattcca caccccccgc cggcacccgc 120
gtccgcgcca tggccatcta caagcagtca cagcacatga cggagggtgt gaggcgctgc 180
ccccaccatg agcgctgctc agatacgat ggtctggccc ctcctcagca tcttatccga 240
gtggaaggaa atttgcgtgt ggagtatttgc acactttcg acatagtg 300
gtgggtgcct atgagccgccc tgagggtggc tctgactgtt ccaccatcca ctacaactac 360
atgtgttaaca gttcctgtcat gggcgcatg aaccggaggc ccattccctcac catcatcaca 420
ctggaaagact ccagtggtaa tctactggga cggAACAGCT ttgagggtgc tgtttgc 480
tgtcctggga gagaccggcg cacagaggaa gagaatctcc gcaagaaaagg ggagccctcac 540
cacgaagctg ccccccaggaa gcactaagcg agcactgccc aacaacacca agctccctc 600
cccagccaaa gaagaaanca ctggatngag aatatttcac cccttcanat tcgttggcg 660
tgagcgcttc cganaatgtt ccgaagagct gnaagaaggc cttgggaact caaaggatgc 720
ccaaggcttggaaaggagc caangggggg gaancaangg gctcaactnc aagccaacct 780
gaaagttcca aaaaanggggt ccagt 805

<210> 177
<211> 626
<212> DNA
<213> Homo Sapiens

<400> 177
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caggtttgc ggcaggccgt catgagtgc ggtggaaaggc tccgaggggcg tggcgagggg 180
ctcgccggg gccacacact tgtggagcta gaaatantgg ggcagggtct tctctatcac 240
caggggctcc tccatgggtc cgtagcgctt caccacgcag ccgttctgt cgatgaggaa 300
ctgtgganan acgggtgtcca aactgtgggg ccaccctgc aaggggctga ggctccctt 360
cctgtcccgct gcccatctgg gccacggctg tggccagggg aaactgttcc cctacccccc 420
acagccccc tacctttgtt gaagttccac ttgtatggcac tggaaaanaa gcacatggac 480
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anaaaaggttg ttagcttccc ccggtnccctc cacangccac agtgccccca aanccccccc	600
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<211> 747
<212> DNA
<213> Homo Sapiens

<400> 181
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 tgccttctt tataataaga cccaaaggaa gaaaagaaaa ggtatgtacaa tgaaggta 180
 agttttaag caccaaaata tttatgaca gggacaaaaaa aacaaaaaac aaacaaaaat 240
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<210> 182
<211> 909
<212> DNA
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 gaagaatcaa tatcgtgaaa atggccatac tgcccaaggt aatgtataga ttcaatgcca 240
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 aaattgcaaa tggggattct attaactaa agggcttttgc cacagcnaag aagctccatc 840
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<210> 183

<211> 708

<212> DNA

<213> Homo Sapiens

<400> 183

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<210> 184

<211> 855

<212> DNA

<213> Homo Sapiens

<400> 184

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<210> 185

<211> 865

<212> DNA

<213> Homo Sapiens

<400> 185

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<210> 186
<211> 736
<212> DNA
<213> Homo Sapiens

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<210> 187
<211> 946
<212> DNA
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<400> 187
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<210> 188
<211> 802
<212> DNA
<213> Homo Sapiens

<400> 188

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<210> 189

<211> 807

<212> DNA

<213> Homo Sapiens

<400> 189

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<210> 190

<211> 608

<212> DNA

<213> Homo Sapiens

<400> 190

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ctagatttCA ggattacACA aagtGAGTAA ctGTGCCAAA ttCTTAAAT ttCTTGTAGGT	300
gtggTTTTG tcatgtAGCA gTTTTATGT agatcnATAT ntAAAAGTCC acacCTCTC	360
agacANGCCA atgAAACnAC taaATTCAA tCTGTACAAN ctaAAATAGTA attacAGTCC	420
tCTANGTGNn caangataCT tacaccACAT anacaAAATnT acnnTACGCA naacaACCTT	480
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gttttgggtt ccaatCCATT ggttttG	567
<210> 195	
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<212> DNA	
<213> Homo Sapiens	
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ccaAGAAAGA ANCANAAGA AAAGCAAAAG cagaAGCTAA acggAAAGGAG caAGAAAGCTA	180
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tcctgttncc tGCTGGAAACA AANTCAAGAT gggAAAGTTAT tgCCAANTAC ATGAACATAC	720
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<211> 561	
<212> DNA	
<213> Homo Sapiens	
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<210> 197
<211> 691
<212> DNA
<213> Homo Sapiens

<400> 197	
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cacagtgtan tatgaataac agtttcaccc cagctcctat gatcatggag ataccagaat	180
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ttatggaccc tcatgccatg ccttatacgcc attctcctgc tgtgacttcc tatgcaacca	360
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<210> 198
<211> 646
<212> DNA
<213> Homo Sapiens

<400> 198	
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ttcaaagtac atactangaa acancgaggc tgggtggcgt tgtgtgcgtt anggctgatt	540
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<210> 199
<211> 811
<212> DNA
<213> Homo Sapiens

<400> 199	
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cacaattcca ttttacaaag tttgctggag acactgaagt gtttgaagaa agatgatgaa	240
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<210> 200

<211> 763

<212> DNA

<213> Homo Sapiens

<400> 200

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tgtccatcc tttgtttc ctttgcattt ttctttcc tcaacaatgc atccaaatgg	660
gtttaatttc aacatctaca gaacaaaact cccttcattt tgacaaatgc agaatcnctt	720
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<210> 201

<211> 717

<212> DNA

<213> Homo Sapiens

<400> 201

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ttgcagccgc ggctgcccaa gcaaggccgc tacagatcc cgcgcgcgc tgccggacgc	660
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<210> 202

<211> 647

<212> DNA

<213> Homo Sapiens

<400> 202

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caagattagt agagaaaagc agaatgccca aatttcacac acagactaca cagcaaatgc	120
tactggggca tatccctaggg agaccggag tccgagcggg gcccccaggg ctctaagtac	180
cacggagcac gtgcggcaca tgccttgcgt taaggcttag ttacgtcaac aggtcaccgt	240
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<210> 203

<211> 786

<212> DNA

<213> Homo Sapiens

<400> 203

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<210> 204

<211> 738

<212> DNA

<213> Homo Sapiens

<400> 204

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<210> 205

<211> 818

<212> DNA

<213> Homo Sapiens

<400> 205

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atccttcaag gcccggttt cgatgancct tcttctctc ctccgtctc	660
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<210> 206

<211> 927

<212> DNA

<213> Homo Sapiens

<400> 206

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agattcacca gaccttggac cagaccctgc tggactcaa caacctgtga	
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<210> 207

<211> 910

<212> DNA

<213> Homo Sapiens

<400> 207

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<210> 208
 <211> 745
 <212> DNA
 <213> Homo Sapiens

<400> 208
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<210> 209
 <211> 965
 <212> DNA
 <213> Homo Sapiens

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 ggnccagcc ttttgagaga taaatccctt angaaancc ggtccnaaaaa tactttccctt 900
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<210> 210
 <211> 867

<212> DNA
 <213> Homo Sapiens

<400> 210

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aagtttgggt ttaactccct ttttcagaa caagatttag taaaattttg gnnggacccct	660
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acaattttt acttggctca agaaancntt tacttaaacc tttcaggtac cttttaaaaaa	780
nccttangtt ttaaaaaaaaaa tgggttataa gggctggtaa ccnaagggttgg cccttgggt	840
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<210> 211

<211> 972

<212> DNA

<213> Homo Sapiens

<400> 211

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cagaacataaa attatttagga aacattaaaa atgtggccaa gacagctaac aaggaccact	180
tggttacagc ctataaccat ctttttggaaa ctaagcgttt taagggtact gaaagtataa	240
gtaaaagtgtc tgagcaagta aaaaatgtga agcttaatga agataaaaccc aaagaaacca	300
agtctgaaga gaccctggat gagggtccac caaaatatac taaatctgtt ctgaaaaagg	360
gagataaaaac caactttccc aaaaagggag atgttgcattt cttgtgtat acaggaacac	420
tacaagatgg gactgttttt gatactaata ttcaaaacaag tgcaaaagaag aagaaaaatg	480
ccaagcctt aagttttaag gtcggagtag gcaaaagttt cagaggatgg gatgaagctc	540
tcttgactat gagtaaaggaa gaaaaggctc gactggagat tgaaccagaa tgggcttacg	600
gaaagaaaagg acagcctgat gccaaaatttcc caccaaatgc aaaactcaact tttgaagtgg	660
aatttagtggta tattgattga aatagcagtg cttcagctt aaggatatta gcaacaatga	720
taaaaacttgg ccttgaagaa atttacacaa cttagttagaa cttgttacta ttgtaaagga	780
agagtcaact ggaaaattca aggagttaat aaaattttgtt tacttggtcc cagctttga	840
gagataaaatc ctttatgaat ccctggtcta aaatactttc ctacagctgt gtaaaatact	900
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<210> 212

<211> 817

<212> DNA

<213> Homo Sapiens

<400> 212

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tctcgcaaaatggggaaaga ggtggatgat gagagtctga aagagctatt cagtcagttt	180
atcaaaaaact ttggggaaaga ggtggatgat gagagtctga aagagctatt cagtcagttt	240
ggtaaggaccc taagtgtcaa ggtgtatgaga gatcccaatg gaaaatccaa aggctttggc	300

tttgtgagtt acgaaaaaca cgaggatgcc aataaggctg tggaaagagat gaatggaaaa	360
gaaataagtgt gtaaaaatcat atttgttaggc cgtgcacaaa agaaagtaga acggcaggca	420
gagttaaaac ggaaatttga acagtgaaa caggagagaa ttagtcgata tcagggggtg	480
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tctcctttt gatcaattac cagtgcataag gtaatgctgg aggatggaag aagcaaaggg	600
tttggttcg tctgcttc tctgcataa gaancaacca aagcagtcac tggagatgaa	660
tggacgcatt ttggggctcc aaccactata tggtgcctg gccccanagg aagggaanag	720
agaaaggntc accttgacca accagttta tgcaacgaan tggctggaa tngagaacca	780
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<210> 213
<211> 756
<212> DNA
<213> Homo Sapiens

<400> 213	
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ggcactttat gatactttt ctgcctttgg aaacatactg tcctgcaagg tgggtgtgtga	180
tgagaacggc tctaagggtt atgcctttgt ccacttcgag acccaagagg ctggcgacaa	240
ggccatcgag aagatgaatg gcatgctcct caatgaccgc aaagtatttgc tgggcagatt	300
caagtctcgc aaagagcggg aagctgagct tggagccaaa gccaaaggaat tcaccaatgt	360
ttatatcaaa aactttgggg aagaggtgga tggatgagat ctgaaaagagc tattcagtca	420
gtttggtaag accctaagtgt tcaaggtgat gagagatccc aatggaaat ccaaaggctt	480
tggctttgtg agttacgaaa aacacgagga tgccataaag gctgtggaaag agatgaatgg	540
aaaagaaaata agtggtaaaa tcataatttgc tggccgtgca caaaagaaa tagaacggca	600
agcagagtttta aaacggaaat ttgaacagtt gaaacaggag agaatttagtc gatatcangg	660
ggtgaatccc cacattaaga acttggatga cactattgat gatgaagaaa attaaggaaa	720
agaattttcn ccnnttggga tnaattaaca agttgc	756

<210> 214
<211> 728
<212> DNA
<213> Homo Sapiens

<400> 214	
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cagaacccaa agaacatatt cgtataatttgc aaaaatttca ggtgtttcat aattgacattt	180
ttgatacaaa atgacatttgc aaatttgc aaatttgc tttgtatcc ttgggtgtga ggtccatagg	240
acaagctagg aagtcttcaa accttgcatttgc gaattccata aggggttatt tggcttttgc	300
atcggtttt ctttgcataa gaggtgcgc cagcaacagc gcccacccgc tggcagctt	360
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actcggggga ctctaacatg tgcagcgc tgcgcgc canagttgtc tatctccgc agcattcccg	480
tgtatccccc agccagattttaaatttgc tttggatgan tggaaacaag ctttctccca	540
gcattctgcattt ctgttccctgg ggggggtgcgc canccaaacag gaggcaatca ntggntccng	600
gccctgcaca tggaccgcac ggctgggtgc cctgcacaaan gctgtatggc aaggatgaaag	660
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caacaaca	728

<210> 215
<211> 710
<212> DNA
<213> Homo Sapiens

<400> 215

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canaacccaa	agaacatatt	cgtataattg	aaaaattcta	ggtgcttc	aattgacctt	180
ttgatacaaaa	atgacctatt	aaatttgc	aa	tttgtaanc	tttgtgttga	240
acaagctagg	aagtcttcaa	acctttagt	gaattccana	aggggttatt	tggctttga	300
atcggtttt	ccttgtctaa	naggtagcag	cagcaacagc	gcccaccttc	tggcagctt	360
ctttcttggc	atgatgagcc	tgtanaactg	ctacagcttc	atccaccttg	gagcgganag	420
actcggggga	ctctaacatg	tgcagcagct	canagttgtc	tatctccagc	agcattcccg	480
tgatcttccc	agccagattt	gaatgcattt	tttggatgan	tggaaacaag	cgttctccca	540
gcatctgc	ctgttcctgn	gggggtgtc	canccangca	tggaggcaan	tcagtggctc	600
ctgccccctgc	acaatggacc	gcaaggctgg	gggggtgcctg	canaaggctg	tttgggcaag	660
gangaaggc	ctgcggaana	ctgggangcg	tattttgttan	ggggggcaaa		710

<210> 216

<211> 824

<212> DNA

<213> Homo Sapiens

<400> 216

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aaagttcagc	cccgcggggc	ctgtgtgtc	catccgggtc	tgccgcgata	tgatcacccg	120
ccgctccctg	ggctatgcct	acgtcaactt	ccagcagccg	gcccacgtcg	agcgggcctt	180
ggacaccatg	aaccttgc	tgattaagg	aaagccaatc	cgcatcatgt	gttctcagag	240
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tatagataac	aaggcacttt	atgataacttt	ttctgtttt	ggaaacatac	tgtcctgcaa	360
ggtgtgtgt	gatgagaacg	gctctaagg	ttatgcctt	gtccacttcg	agacccaaga	420
ggctccgac	aaggccatcg	agaagatgaa	tggcatgctc	ctcaatgacc	gcaaagtatt	480
tgtggcaga	ttcaagtctc	gcaaagagcg	ggaagctgag	cttgagcc	aagccaagga	540
attcaccaat	gttatatatca	aaaacttgg	ggaanaggtg	gatgatgaga	gtctgaaaga	600
agctatttcan	tcaagtttgg	taagacccta	agtgtcaang	tgatgagaga	tccaatggga	660
aatccaaaag	gcttgggct	tttgtgagtt	acgaaaaaca	cnaggatgcc	aataaggctg	720
ttggaaagaa	atgaatggga	aaagaaataa	antggtaaaa	tcataatttgc	tagggccgtn	780
cacaaaaaga	aagtttaaac	gggnaggca	aattttaaaac	cggg		824

<210> 217

<211> 749

<212> DNA

<213> Homo Sapiens

<400> 217

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ttctggggga	aaaaatcaaa	acccacaata	aaaaaaaaagt	taacactgtc	tgggccacag	120
cagaacccaa	agaacatatt	cgtataattg	aaaaattcta	ggtgcttc	aattgacctt	180
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acaagctagg	aagtcttcaa	acctttagt	gaattccata	aggggttatt	tggctttga	300
atcggtttt	ccttgtctaa	gaggtacgag	cagcaacagc	gcccaccttc	tggcagctt	360
ctttcttggc	atgatgagcc	tgtagaactg	ctacagcttc	atccaccttg	gagcggagag	420
actcggggga	ctctaacatg	tgcagcagct	cagagttgtc	tatctccagc	agcattcccg	480
tgatcttccc	agccaagatt	tgaatgcatt	gtttggatga	tgggaacaa	gcgttctccc	540
agcatctgc	tctgttcctg	gggggggtgt	gcatccagca	tgggangcan	tcagtggctc	600
ctgccccctgc	acatgggacc	gcaaggctgg	ggtgcctgca	naggctgtat	gggaaggatg	660
nagggctgcc	ggncaaactgg	ganggcgtat	ttgttaggggg	caaacaagcc	cggggaaagca	720
nccagcagca	acancaacng	cttggcgcc				749

<210> 218
<211> 600
<212> DNA
<213> Homo Sapiens

<400> 218

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tcaaaaccca caataaaaaaa aaagttaaca ctgtctggc cacagcagaa	cccaaagaac	120
atattcgat aattgaaaaaa ttcttaggtgc ttcataattg accttttgat	acaaaatgac	180
ctattaaatt tgcaatttgt aatccttgtt gttgaggtcc ataggacaag	ctaggaagtc	240
ttcaaacctt gagttgaatt ccataagggg ttatggct tttgaatcgg	ttttccttg	300
tctaagaggt agcancagca acagcgccc ccttctggc agcttcttc	ttggcatgt	360
gancctgtag aactgctaca gttcatcna cttggagcg gngagactcg	ggggactcta	420
acatgtgcag cagtcagag ttgtcnatct ccaaggcaga ttccctgtat	cttcccagcc	480
anatttgaat gcattgtttt ggatgangtg ggganaaagc gttctncag	cannncngctt	540
cngtnccnn ggaggggggt gcntgcaagc ccagcattga aggcaagttc	antggctcct	600

<210> 219
<211> 1077
<212> DNA
<213> Homo Sapiens

<400> 219

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ccgctccctg ggctatgcct acgtcaactt ccagcagccg gccgacgctg	agcgggcttt	180
ggacaccatg aaccttgcgt tgattaaggg aaagccaaatc cgcatcatgt	ggtctcagag	240
ggatccctt ttgagaaaaat ctgggtgtggg aaacgtctc atcaagaacc	tggacaatc	300
tatagataaac aaggcacttt atgatacttt ttctgccttt ggaacatac	tgtcctgcaa	360
ggtgggtgtgt gatgagaacg gctctaaggg ttatgccttt gtccacttcg	agacccaaga	420
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gctattcagt cagtttggta agaccctaag tgtcaaggtg atgagagatc	ccaatggaa	660
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agtagaacgg caagcagagt taaaacggaa atttgaacag ttgaaacagg	agagaattag	840
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attaaggaaa gaattttctc cttttggatc aattaccagt gctaaggtaa	tgctggagga	960
tggaagaagc aaagggtttt gcttcgtctg cttctcatct cctgaagaan	caaccaaagc	1020
agtcactgga gatgaatgga cgcatgggg ggctccaacc actatatgtt	gccctgg	1077

<210> 220
<211> 1007
<212> DNA
<213> Homo Sapiens

<400> 220

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tctgtcaccc ttcccctacag cctgaggagt acatggcta cggtcagagg	caagccgact	180
caaaggcagta tggagataaa atcatagagg agctgcaaga tctaggcccc	caagtgtgga	240
gtgagaccaa gtctgggtgt gcacccaaa agatggcagg tgcgagcccc	accaagatg	300
acagtaagga ctcagatttc tggaaagatgc ttaatgagcc agaggaccag	gccccaggag	360
gggaggaggt gccggctgag gagcaggacc caagccctga ggcagcagat	tcagcttcgt	420

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gtgatccaga acggcagaga gagatgaaag aagaggagga tgaggatgag gatgaggatg	660
aagatgagga tgaacggcag ttactggag aatttggagaa ngaactggaa gggatcctgc	720
ttccgtcaga ccgagacccgg ctccgtcgg agtgaangc tggcatggag ccggaaactg	780
gnaaacatca tccaggagac angagaaaaga nctgggaccc anatggggct gaagaangga	840
tcagaatccg ggatcggca atgctggctc taaaaatcaa ctctcaacaa antcattaaa	900
aagactggag gaaaaaacaa gagttccaaa ncctggtcaa nnaagcnat aaaaaagaag	960
gttgcctccaa aaaagnctcc cccatcaanc caaccctnca gggaaaa	1007

<210> 221
<211> 833
<212> DNA
<213> Homo Sapiens

<400> 221	
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tgtggagtga gaccaagtct ggggtggcac cccaaaagat ggcaggtgcg agcccgacca	120
aggatgacag taaggactca gatttctgga agatgcttaa tgagccagag gaccaggccc	180
caggagggga ggaggtgccg gctgaggagc aggaccaag ccctgaggca gcagattcag	240
cttctggcgc tcccaatgat tttcagaaca acgtgcaggt caaagtctt cgaaggccctg	300
cggtttgtat tcgattcata gaggagctga aagggtggAAC aaaaaagggg aagccaaata	360
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aaagggggtga tccagaacgg cagagagaga tggagaaga ggaggatgag gatgaggatg	480
aggatgaaga tgaggatgaa cgccagttac tgggagaatt tgagaangaa ctggagggaa	540
tcctgcttcc gtcagaccga gaccggctcc gttcggaggt gaangctggc atggagccgg	600
gaactggnaa acatcatcca ggagacanga gaaaganctg ggacccanat ggggctgaag	660
aanggatcag aatccggat cggcaatgc tggctctcaa aatcaactct caacaaantc	720
attaaaaaga ctggagggaa aaacaagagt tccaaancct ggtgaannaa gcncataaaaa	780
aagaagtttgc tcccaaaaaaa gnctccccc tcaanccaaac cctncaggaa aaa	833

<210> 222
<211> 745
<212> DNA
<213> Homo Sapiens

<400> 222	
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cacaccttt tcactggat tgtgctggag gtgatagggca gcattctacc atttcctcag	120
caacagaggt gaaggctcct caactcagaa gcacaaaattt tagggacag ggtggcagg	180
gaaaggggaga agggaaatccc aaggcaattt aatagaagag ggtaaaacga ctccaaacat	240
cactaagggc aggtggggc ctgcttgc agtgcctgt aagtgtcctg ccctccttgc	300
tctctctacc cacctccact caaaagatcc tactgaatct ccaggttaggc agcagggaaat	360
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agagttcagg agagcaaata tcacaggccc ggtgaggtct caaggtggct gccagcagg	480
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ngccagtcca ggaagatctg gattccgtga angggtaag tgttagtggtgc tctcagaag	660
tcaaattntc caagtccctt gttgcctcc ccacctggag aagccccana cccggnggtt	720
attgctcncc antccttctt gcccgc	745

<210> 223
<211> 747
<212> DNA

<213> Homo Sapiens

<400> 223

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tctgtcaccc	ttccctacag	cctgaggagt	acatggccta	cgttcagagg	caagccgact		180
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gtgatccaga	acggcagaga	gagatggaa	ngaagangan	gatgaggatg	aggatgaggg		660
atgaaagann	aaggatgaaa	cgggcaagtt	actgggaaan	aattttgana	aagggaactg		720
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<210> 224

<211> 618

<212> DNA

<213> Homo Sapiens

<400> 224

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gaggtgaagg	ctccctcaact	cagaagcaca	aatttgttaggg	gacagggtgg	gcaggaaaag		180
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ancctccan	ctgcccngt	ttt	ggccctcaag	gggttccaan	gttcngaaa	gtgggggagg	600
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<210> 225

<211> 765

<212> DNA

<213> Homo Sapiens

<400> 225

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tcagtgtgt	aggaccttcc	agggcagctc	agatctcatc	agacatcagg	taactcatac		180
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gttca	tattcaacgt	cggagaattc	atagtggtga	gaaaccctat	aatgttaagg		540
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gagagaaact	tgaagaatgt	gagaaaacct	tca	tganggagct	tagggagag		660
cagaaaattc	accanggaag	agaaagcctt	attgggn	atcagtgtgg	tanggctt		720
caagggcagc	tcangacctc	atcggccat	caggtaa	actc	aatac		765

<210> 226
<211> 791
<212> DNA
<213> Homo Sapiens

<400> 226

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gtgtatggc ctccacccccc caacttctcc atccccttca tccctatggg tgtgctgcat	120
tgcaacgtcc ctgaacacca taacttagag aatgaagttt ctagattaga agacataatg	180
cagcattaa aatcaaagaa gcgggaagaa aggtggatga gagcatccaa gcggcagtcg	240
gagaaagaaa tggagaact gcatcataat attgatgatc ttttgcaga gaagaaaagc	300
ttagagtgtg aagtagaaga attacataga actgtccaga aacgtcaaca gcaaaaggac	360
ttcattgtat gaaatgtaga gagtcttatg actgaactag aaatagaaaa atcactcaaa	420
catcatgaag atattgtaga tgaaaatttag gtcattgaga agactttct gaaacgtcgc	480
tcanagctca gggaaagctga ccgactcctg gcagaggctg agagtgact ttcatgcact	540
aaagaaaaaa caaaaaatgc tggaaaag ttcaactgat ccaagagaag ttatggcaa	600
actgagtcag atgctgaggg aatttagaaag gagagctcan gaaactgctg ttaanctcg	660
caaancgtat cagcagctaa gatcgctcca agctgatgca aaaggatttg gancancaca	720
angatcaagc aagaagaaat cttgaaaaga aattaacnaa aatttnnca gcaaaagact	780
cagacttcaa a	791

<210> 227

<211> 687

<212> DNA

<213> Homo Sapiens

<400> 227

gattgttatac ttttattttc atatgaaaaa tagattttaa gcaaaattca aaaataactc	60
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gtaggttcaa atatgcagtt aaaatcaactg tttttttta aacatgttac gaagattaaa	180
aaaaaaaaagg ctcagccaca tggggttta aattccata tgcaactatt cccatatgt	240
ctatgtacaa gtgatttata aaaacattgg cattaatggt acaggcaaag taaaactacag	300
tggagttca naatctcagt tcactgcatt ttgattaaaa aaaccatgtg acattccat	360
tatgaagtca gtgaggtgtt ggaggtgttt tccttgaata tatttacaca agacagtatt	420
cctcatctgg ctgaggcatt ctttccgga ttttgccaa gttganagtc ctctgtgagg	480
gaagactcca agctgagaca gactgggtga tgacgctgaa tctgcaaagg tgcctggta	540
ccaaattcccc ctaanagcat cctacttgc tccncaaact gtgnaaagt gccctctg	600
ctgccgctt ccttaatna aaacttctgg ctngcttgg ggcacacgt gtcgganttg	660
ggccctttag tcnggcttcc cggggaa	687

<210> 228

<211> 810

<212> DNA

<213> Homo Sapiens

<400> 228

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tacaantgga ccaactatct gagcggttgg cagcctcgat gttcccttct ctgtggggga	180
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cctggggaaac agtatttcta cctgaaggcc agaagtgtgg ctgaaaagaca gcggtggctg	360
gtggccctgg gatcagccaa ggcttgcctg actgacagta ggaccaggaa ggagaaagag	420
tttgctgaaa acactgaaaaa cttgaaaacc aaaatgtcan aactaagact ctactgtgac	480
ctcccttgc ancaagtata taaaacata agaagtgacc acaactggtg tgtccaaattc	540

tgaggtaaaag gagtcttcca ctctgggtgt ttcgtangag ggaattgatg tgggaacttt	600
gctgaaaatca anctgntata ctttttctga aagaccttgg taagaattca tgcanatngc	660
aaattgcagc cttnaanctc ctgaaggctn cttctaaccg gcactccaac canggaatna	720
anctnaagct gggccaatgg ctccaaagtt ccaacnaaag gttaaaaat cccagctcaa	780
atttgggcng caaacaaagg gcaatccaac	810
<210> 229	
<211> 552	
<212> DNA	
<213> Homo Sapiens	
<400> 229	
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ctgtgcggaa gctcttagt ttaatttagat ccatttgc aatttcggct tttgttgc	180
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tagccagttt tccccancacc atttattaaa tagggaatcc ttcccant tcctgtttt	420
gtcangtttgc tcaaagatca natggctgta natatgcanc attatttccg agggctctgt	480
tcngttccat tggctcacat ttccgtttt gttccngtac catgctgtt tttgttacng	540
gtanaccttg gt	552
<210> 230	
<211> 842	
<212> DNA	
<213> Homo Sapiens	
<400> 230	
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aaaaggagtc ttgtataaca cagttgaaga aagagttatc tgaaaacatc aatgctgtca	180
cattgatgaa agaagagctt aaagaaaaaa aagttgagat tagcagtctt agtaaacaac	240
taactgattt gaatgttcag cttcaaaata gcattcgcct atccaaaaaa gaagcagcca	300
tttcatcaact aagaaagcag tatgatgaag aaaaatgtga attgctggat caggtgc	360
atttatctt taaagttgac actctgagta aagagaaaaat ttctgcttt gaggcaggtag	420
atgactggtc caataaattc tcagaatgga agaagaaaagc acagtcaga tttacacagc	480
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tttagaaacag agttaaagtc tcaaacagca agaattatgg gatttagagga ccatattanc	720
caagaaaaact atttggaaat tagatccattt aatngaaaag ttccattaaa aattacaatc	780
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ga	842
<210> 231	
<211> 781	
<212> DNA	
<213> Homo Sapiens	
<400> 231	
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tttgcataca atacagttat gtattggcta ttcacaattt acagtagtgt ttttcctct	120
aaaaaatata agtacaaaag ctaagtaaac aatgaggtac tgccatttgg gatTTTAC	180
atgtcttagc taaaagaact ggtcttttagc aatattcaa cagatcaacc tgaataaaaat	240

agtcaattaa atgctcta attacagaaa aaatccacta agttcacct caaatgtat	300
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aaaagaatgg atgaaaggaa tattatgtaa gcccataaag caggttaagt tatcaaata	420
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ttgggtctt tggctacatg aggggcctg aatgacaact tcattctcaa agagtagcaa	600
agtgtggaca agtttccaa gcagcangtc acccaatgtc actcttcctc aagatgaagg	660
atcgaggcca tgacacatgt ttaactaagc acagaccgga tgggtttacc cagaagatac	720
cactggcaan ggtgaagtaa acatcaggcc gaggcaacct tccccnttcc aaaaanttt	780
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<210> 232
<211> 767
<212> DNA
<213> Homo Sapiens

<400> 232	
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agatttgcac acaatacagt tatgtattgg ctattcacaa tttacagtag tgtttttcc	120
tctgaaaat ataagtacaa aagctaagta aacaatgagg tactgccatt tgggatttt	180
tacatgtctt agcttaaaga actggcttt agcaaattt caacagatca acctgaataa	240
aatagtcaat taaatgctct aatttattcag aaaaatcca ctaagttca cctcaaaatg	300
tattgcacaa gtcttttaa aaaatcaccc taaaaataaa taggaaaggt aagccgttct	360
ttaaaaagaa tggatgaaag gaatattatg taagcccata aagcaggtt agttatcaaa	420
atatcttta aacaacataa aactctccca aagagaaaaac tgaagaaaaa actatcacca	480
tttctccact gataaaatct attttanagg cagtctgcaa cttatctgtg ggccagattt	540
ttcttggtct ttggctaca tgagggcccc tgaatgaaaa cttcattctc aaaggagtag	600
caagtgtggg acagtttcc aagcagcagt caccaatgt cactttctt caagatgaaa	660
gatcgagnc atgacacatg ttaacctaag nacangactg gaggtttac ncangaagat	720
acactgcgaa ggtgaaagtt aaacatcaag ccgaggaacc tccccctt	767

<210> 233
<211> 879
<212> DNA
<213> Homo Sapiens

<400> 233	
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ctatcaataa ggcccaggag gtggaggctg aacttttaga aagccatcaa gaagagacaa	120
atcagttact taaaaaaatt gctgagaaag atgatgatct aaaacgaaca gccaaaagat	180
atgaagaaat ctttgatgct cgtgaagaag aaatgactgc aaaagtaagg gacctgcaga	240
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gcaatgataa tgtaacaatt atggagctac agacacagct agcacagaag acgactttaa	360
tcagtgattc gaaattgaaa gagcaagagt tcagagaaca gattcacaat ttagaagacc	420
gtttgaagaa atatgaaaag aatgtatatg caacaactgt ggggacacct tacaagggtg	480
gcaatttcta ccatacggat gtctcaactt ttggagaacc taccgaaattt gagtatttgc	540
gaaaagtgtt tttgagtat atgatggtc gtgagactaa gaccatggca aaagttataa	600
ccaccgtact gaagttccct gatgatcaga ctcagaaaat tttggaaaaa gagaagatct	660
cggctgatgt ttacttcacc tcgcagtggt atcctcnag taaaccatca gtcgtgccta	720
agtttacatg tgcatagggt ccgatttttc atccttggaa gaaagagtg acattgggt	780
naccggctgc ctggaaaaa ctgtccanac ntgcnaacn cttggggaa atggaagntt	840
ttccanttca aggccccctt caangnttgc ccaaacagg	879

<210> 234
<211> 780

<212> DNA
 <213> Homo Sapiens

<400> 234

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gtacaaaagc taagtaaaca	atgaggtaact gccatttggg	atttttaca tgtcttagct	180
taaagaactg gtcttagca	aatattcaac agatcaacct	gaataaaata gtcaataaa	240
tgctctaatt tattcagaaaa	aatccactaa gtttcaccc	aaaatgtatt gcacaagtct	300
ttttaaaaaa tcaccctaaa	aataaataagg aaaggtaagc	cgttctttaa aaagaatgga	360
tgaaaaggaat attatgtaa	cccataaagc aggttaagtt	atcaaaaatat cttttaaaca	420
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tttccaagca gcagtcanc	aatgtcactc ttcttcaaga	tgaaagatcg gagccatgac	660
acatgttaac taagcacaga	cntgatggtt tactncagaa	gattaccact gcnaaggta	720
aagttaaaca tcaagnncgag	catncntctc tttccaaaaa	tttccggng tccggattca	780

<210> 235
 <211> 780
 <212> DNA
 <213> Homo Sapiens

<400> 235

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cttttagagga gaaagatcg	tatatcgatg ttctccaaac	tcaggtttct ctactgaaac	180
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cacaggctga agtcttca	aaagaagaga atccagaaag	tgatggagag ccagtagtgg	300
aagatggaac ttctgtaaaa	acactggaaa caetccagca	aagagtgaag cgtcaagaga	360
acctactaa gcgtttaag	gaaacaattc agtcacataa	ggaacaatgt acactattaa	420
ctagtgaaaa agaagctctg	caagaacaac tggatgaaag	acttcaagaa ctagaaaaa	480
taaaggacct tcatatggcc	gagaagacta aacttatcac	tcagttgcgt gatgcaaaga	540
acttaattga acagttgaa	caaggataag ggaatggtaa	tcgcagagac aaaacgtcag	600
atgcatgaaa ccctggaaat	gaaagaagaa gaaattgctc	aactccgtag tcgcataaaa	660
cagatgacta cccaagggag	aggaattacg ggaacaagan	agaaaagtcc gaaagaactg	720
cnnttgaggg aacttgaaaa	agccttgagt acagnccaaa	aanacagnng aagccaccgg	780

<210> 236
 <211> 711
 <212> DNA
 <213> Homo Sapiens

<400> 236

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ctgacaattt ctgtgtgagt	atctcaattt ctttcttctg	tccttctctc atttgtaaaa	120
tcatattttc ctttccacc	aagatttgct ttgtctgttc	ctgttcttgc ttaccatctt	180
caagtttggc ctcataact	tgggttaaag attttacttt	ttgctccatt tcactatttt	240
gtttttcaag ttgctgcatt	aagtccctgca cctggatttt	gtgagcatct aactcagttac	300
aaacatcttt ctttctgtct	tcaacttcag caacctgttt	ggttaagaaga attcttctg	360
tttccaaatc caacaacttc	tgctgcaatt gggccaactg	ttcctctat gcttttgtct	420
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gttccccccttc agacctttt	atatctgcct ccaaattttc	tacatgagcc tgatgcttt	540
tcaaatgctt gtcctttcc	ttcaagagaa gctcaagttg	nttaanttga tcttttaaag	600
ccttctcaan tcctccggga	tanaaaacnt cgtgttctt	naatgagaac ggtcaacntg	660

ccggctgggt gataantttt cggttcanc c anccttgggg ctccaaattc c

711

<210> 237

<211> 658

<212> DNA

<213> Homo Sapiens

<400> 237

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aaaatataag tacaaaagct aagtaaaca tgaggtaactg ccatttggaa ttttttacat	180
gtcttagctt aaagaactgg tcttttagcaa atattcaaca gatcaacactg aataaaaatag	240
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cacaagtctt tttaaaaaat caccctaaan ataaatagga aaggttaagcc gttctttaaa	360
aagaatggat gaaaggaata ttatgttaagc ccataagagc aggttaagtt atcaaaaatat	420
cttttaaaca ncataaaaact cttcccanga gaaaaactgaa gaaaaaacta tcaccatcc	480
ttccactgata aaatcttattt taaaggcagt ctgcancat tctgtgggccc aagattttc	540
ttggncnctt ggctacatga gggggccctg gaatgaaaaa cttcattccc aanggagttt	600
gcnaggtgtg ggacaggttt tccaggcaca gcaagtnagc caaatngtca gctcttcc	658

<210> 238

<211> 678

<212> DNA

<213> Homo Sapiens

<400> 238

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tctgaaaaat ataagtacaa aagctaagta aacaatgagg tactgccatt tgggattttt	180
tacatgtctt agcttaaaga actggctttt agcaaataatt caacagatca acctgaataa	240
aatagtcaat taaatgtctt aatttatcg aaaaaatcca ctaagttca cctcaaaatg	300
tattgcacaa gtcttttaa aaaatcaccc taaaaataaa taggaaaggt aancggtct	360
ttaaaaagaa tggatgaaag gaatattatg taagcccata aagcaggtt agttatcaaa	420
atatcttta aacaacataa gaactcttcc caaggagaaa actgaannaa aaaactatca	480
ncatttcnnnc actgataaaa tctantttaa agggnagtn gcaacttanc tggggccag	540
attttccgt ggggcttttggctacantn agggggccct gaatgaaaaa nttcaattcc	600
ncaaatgnng tagcaaatttgg tggncangt tttccaaag cagncaantt canccnana	660
tgtcactcct tccttcaa	678

<210> 239

<211> 1402

<212> DNA

<213> Homo Sapiens

<400> 239

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atcagttact taaaaaaatt gctgagaaaag atgatgatct aaaacgaaca gccaaaagat	180
atgaagaaaat ctttgatgct cgtgaagaag aatgactgc aaaagtaagg gacctgcaga	240
ctcaacttga ggagctgcag aagaaaatacc agcaaaaagct agagcaggag gagaaccctg	300
gcaatgataa tgtaacaattt atggagctac agacacagct agcacagaaag acgactttaa	360
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ccaccgtact	gaagttccct	gatgatcaga	ctcagaaaat	tttggaaaga	gaagatgctc	660
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gttctttaag	ctaagacatg	taaaaaatcc	caaatggcag	tacctcattg	tttacttagc	1260
ttttgtactt	atattttca	gaggaaaaaa	cactactgta	aattgtgaat	agccaataca	1320
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taaagtttat	ttactatata	ac				1402

<210> 240
<211> 760
<212> DNA
<213> Homo Sapiens

<400> 240	
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ccaac tcaatatgaa aaactcaact taattttgtg catgattttc ataccttcct	180
ttgct ggggtatgtc atgttattga tccagctcg a ctttatgaga aacttggaca	240
jacaa tagaataaaat gaagtcaata aaaccattct tttaacaacc ttaataccat	300
zagag tgttattttc cttttgtca taaggtgtct gaaaaatgaag tatggaaatg	360
tgaa taaaagaccca gttttcagaa tctctccacg gagtagagaa actcatccca	420
aaaga gcccgaagaa gaagatgaag atgttcaagc t gaaaagagtc caagcagcaa	480
ttcac tgctccaaac ttggaggagg aaccagtcat aactgcaagc tgtttacaca	540
attt tgagacaaaag aaaagtgtct ttcaacaag aaagaagaaa atagccatca	600
tttc cntttgtgtt aaaaaagggtg aaagtttgg ggattaccta ggacacaaatg	660
ggta aaagtacttc cattaaaatg ataacntggg tgcacaaaagc ccaaactgcan	720
gtgg gtgttacaaa ggnagcagan gcatcnggta	760

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<210> 241  
<211> 745  
<212> DNA  
<213> Homo Sapiens
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<400> 241
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ctataatgac atggaaatg ttcataact gtgaggtaa aagatacaga aaatgactat
gcctacngat actacctttg aaaaaggatc cataaaaaat acattgaata taagttggct 120
aaagaaaata ttaactgcgg tactttctta cagattangg ctancttctt ccatataact
tcaatatgtt ctaaaattca catgcattt ttttataatc agaatgtcat tataattaaa 180
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ttagaatccg agtaaataan gttaaaaat anctgataca tttgaagttc aggctaaaaa 300
cctcatattt ttatgtttaa aatgttctca ntgttagctt tattgataat aaccgataac 360
caacctaata ttgtangatt tttaaattat tttaaggcac aaantagacc catgttgggg 420
atgaataaaca tgtnaatttt tgtnaatttt ggtcnacnac ttttccccaa aattttccttg 480
tttccttcan ccnaaaatttt taaaantgaa aactgtatca attatgaaan gttttattaa 540
aangtttnc tttggtaacc n/a 600
                                     660
                                     720
                                     745

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<210> 242
<211> 818
<212> DNA
<213> Homo Sapiens

<400> 242
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agaacctgct gaaattaaga tcatacagaga agcatataag aaggcccttt tatttgttaa 120
caaaggctcg aatacagatg aatttagtca gaaggaagaa gcaaagaact actataagca 180
aggaatagga cacctgctca gagggatcg catttcataa aaagagtctg aacacacagg 240
tcctgggtgg gaatctgcta gacagatgca acagaaaatg aaagaaactc tacagaatgt 300
acgcaccagg ctggaaattc tagagaaggg tcttgcact tctctgcaga atgatctca 360
ggaggtgccc aagtatatac cagaatttcc acctaaagac atgtgtgaaa aattaccaga 420
gcctcagtc ttttagttcag ctccctcagca tgctgaagta aatggaaaca cctcaactcc 480
aagtgcaggg gcagttgctg cacctgcttc tctgtcttta ccatacataa gttgtccagc 540
agaagctcct cctgcttata ctccctcaagc tgctgaaggta cactacactg tattctatgg 600
aacagattct ggggagttt catcagttgg agaggagttt tatagggaaat cattctcagc 660
caacggccctc tttnagaacct taagggctgg gattcangat gaaattgatt ttgataccaa 720
atgggagtagc anntttttt taaaatcct gcaangggg ngttatgcan cttcgtaanc 780
ccggggtaacc ttcaatttgtaa ggntaaaa 818

<210> 243
<211> 799
<212> DNA
<213> Homo Sapiens

<400> 243
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acaatacaat catgttccca aatttccnag gtcataaca atacagtctc aatacaaaag 120
acgtaataat ctattttat tcattttaaa tcaaagaaaac cattccattt cctaacaac 180
aggttaagttt caaaaatgtt ccattttact tttcatcagt cttccctgt tttgaacaag 240
tctttttgag aattcttagt ttttagttt gtttagctt cacactgaaa attttgagaa 300
gcatctaaaaaa aatccacaa ttatgtcataa aagaggggac aatactttaa gtcattcctt 360
ctataaaaaag aatataaggaa actaaatgcc aatttttaag caaatatata gtttcttatt 420
tgccttcgtt aagacagcag atataaaaaat agttcaatat tagtttaac aaggtttgaa 480
caacacatgt actatcagct ttatttacc tgcaaaaata ttttagctac acttggaaaa 540
aaaataaaact tgagaatata acttcacatt tcttaaggcca gatgcaagaa tacttaatct 600
tttctttta aatagaagac atgccataaa atttatgaaa agttaatttg taggaatggn 660
atacatttaaaaatatacngg tttaaccnngg tgaggaaatt ccacatttg cctatttaac 720
aaaaattttta aaccatattt caaaaaggggc tttggggtaa aaagtgattt cccaaagcaac 780
ntcaancant ttaacccttc 799

<210> 244
<211> 726
<212> DNA
<213> Homo Sapiens

<400> 244
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aatatgaaaaa tgaagatctg atcaagcatg gctggcctga agatatctgg tttcatgtgg 180
acaaactctc ttccggctcat gtataccttc gattacataa gggagagaat atagaagaca 240
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gcaagatgaa caacgttaat gtggatataa cggcggtgtc taacctgaag aaaacagctg 360
acatggatgt gggcagataa ggcttcaca ggcagaagga tgtaaaaaattt gtgacagtgg 420

agaagaaaagt aaatgagatc ctgaaccgat tagaaaagac caaagtgcag cggttcccag	480
acctancagc agagaaaagaa tgcagagatc gtgaagagag gaatgagaaa aaagcccaa	540
ttcagggaaat gaaaaagaga gaaanagaag aaatgaagaa gaanaggaa atggatgaa	600
ttangagcta ttcataacta atgaaagttt gaaaatatgt cttcanatca ggatggcaat	660
ggattcagat gaattcatgt taaaaggaga aaaggngaaa aaggacctt gaaaatttg	720
aatgtt	726
<210> 245	
<211> 592	
<212> DNA	
<213> Homo Sapiens	
<400> 245	
ccagattaaa aaaatggtat tttattataa ctttaaaat tgccgaacat cagactgaat	60
atcatcagac acatacacaa aaccactcat ctctaaagtc atttctata ccctctcaa	120
atggccag ttagtttgc ctcaggaat ttccagttc aaccctatac accaacatgg	180
aataaatgga aacactagcc tttgtttt gcccanaagtt ccaaagtgc attacagg	240
gaatatctgc tgcaggaat cattcttgct gctgtgggtg tgagtaaat gcttagttcc	300
ttctaaaatc ataattgcaat tatggacttc tgcttcacgc tgcatcctaa ggcacaatc	360
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cnganaaatt acncctggc ccanaagtt tcacataggt ggcttgggtt acttggggct	480
caggcaacaa ctgccacagg cccagctt atgaanacca tcnatttctt taaaatatgt	540
tggnnactaa gatggaggcc tccggcncan aggaaancan nggacataaa ac	592
<210> 246	
<211> 821	
<212> DNA	
<213> Homo Sapiens	
<400> 246	
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acgaagacac tgaggatgct agtgaactg acctggcaaa gcatgatgaa gaagactatg	120
tagaaatgaa ggaacagatg ttcaggaca aactggctc tctcaagagg cagttgcac	180
aactgcaaga aggtacatta caggaatatc agaagagaat gaaaaacta gatcagcagt	240
acaaagagag gatacggaaat gcagaactct tcctccagct ggaaactgaa caagtggAAC	300
gaaattacat taaagaaaag aaggcagcag tgaaagaatt tgaagacaag aagggttgagc	360
tgaaagagaa cctgattgct gagctagaag aaaagaagaa aatgattgaa aatgaaaagc	420
tgacaatgaa actgactgga gattctatgg aggtgaaacc tatcatgacc agaaagtgc	480
ggaggcgcacc aaatgatccc gtccccatcc cagacaagag gaggaaacct gctccagccc	540
agctaaacta tttgttaaca ggtgaacag atcatggagg atctgagaac attaaataag	600
cttaagtccac ccaagagacc agcatctcca tccttcctg agcacttgcc tgcaacaccc	660
gccggaatct ccaagccccca gaggttcnaa agccccggat anaagaatgg caaacctgtt	720
actatgacaa aaagatggtt accacaagag ccaaggccat cctatcctgg angtcaaagg	780
gacaaaccan gaaactgaaat cctgcctnat taagttccg t	821
<210> 247	
<211> 639	
<212> DNA	
<213> Homo Sapiens	
<400> 247	
gttacacaaa gcatttattt ctctgagaag gccgagagcc acgagaattc atcatctcct	60
gctaggaccc ctgcccccaag cttctggca aatagtgaat tggacgcgcac agggaaagta	120
gctacgtgat ccactaatca gattaaaaac atgaaaatgc actggagagt gtatccctc	180
ctgctcttct ccatggtaga gagacttaaa gataatcaat aaaaatagct gtccttcaa	240

actcagagga ggtttcaaa aacaagtata agaaaaaat aaagaataa aaggaaagta	300
aatcaaaccc cccaatacgc ctgaaagtaa aacagtctca tggtgactga tgtctggaan	360
aagttgaggc agaaaagact gacaaagttg gaangcatcc cggccacaaa agtcccnaa	420
aagaattcan tgcagtgctc tccatccca aggctgagta actattccca gntaagttaa	480
cattttcna nttaaggana nancgaanac annncatnt ctanatccca ctccagaaat	540
anggtcaatg agaangangc actgtannna aagtcaagna gctggancnc cccggcggt	600
tnacccaaga gccccgcct nnaagcctgg gcccaagct	639

<210> 248
<211> 846
<212> DNA
<213> Homo Sapiens

<400> 248	
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cctttccta cctccgagca aaactgtgtt gccactgtg cctgagtcac cagaagagga	120
agtgaaggct agccaactt cagttcagca gaacaaattt tctgtccagt ccaatcctc	180
ccctcagctg cggagcgtta tgaaagtaga aagttccgaa aatgttccta gccccacgca	240
tccaccagtt gtaattaatg ctgcagatga tcatgaagat gatgtatgtc agtttctga	300
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tggaataaaaa actcttgagg aaattaatgc aaagaaaatg aaggaaaaat ctaagaagca	480
aggtgagggt tcttcaggag ttccagttt tttactccac cctgagcccg ttccaggtcc	540
tgaaaaagaa aatgtcagga ctgtggtgag gacagtaact ctctccacca aacaaggaga	600
agaacccttg gttagattga gtcttactga gagactgggg aaacgaaaat ttccagcagg	660
cggtgacagt gatcctccat taaagcttag cctggcacan aggctaaggg aagaaagttg	720
aagctccaga aactaacant gacaaaacac caangaaagc tcaagttcc aagtccccc	780
aaaggggcga attaggecatg tcagccngga ttcaagataa tnagggatgc aacaagatta	840
aaggtt	846

<210> 249
<211> 763
<212> DNA
<213> Homo Sapiens

<400> 249	
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aatggttcaa ataatgcgga acacgaaaca ttgactaata caagtgttt aaatatgaaa	120
caaaaattatt tttaaaaaaa gcaaaagaat aaagaatata tacaaaaggg acctggaaatc	180
tgtaagctga ttccaaaaat gaaataagta gaaaatccat ggtgaaacct gaacattcta	240
cctctgtttt ggagaagggc tatcatcaa cattcagtc gctgaagatg gattggtaga	300
ggtgtgtcta tacataaact tcagtcattt ttgcttgta agaatcatcc caatcttccc	360
aagactgaat gggcagtcc tggcgttttcc tccctttcca tattcccaac aaggctacgt	420
gaagttcaac tcttgcgttcc ccgttttcc ttaggagcca acatgacagg	480
tgggtcagat ttcccttatga gaaacaaaac tggccaccta cagcaaaata tcaaaatggg	540
taagtccttc cttectcttc ctcctgttata tataacaacat atctccttcc aagactatta	600
tttccatcat gccttattcc ttcacaaatc taaaccttga ngtgatatga angaaaccaa	660
catcaagaaa agaaaactca attcagaaat gaanaaaaacg ggcaggtata caatacaccc	720
cagagcatct caatatcccc tggcgttcc acaattcgtt gtt	763

<210> 250
<211> 899
<212> DNA
<213> Homo Sapiens

<400> 250

attcaagtca agagatgtga gaccatgaga gagaagcaca tgcagaaaca gcaggagagg	60
gaaaaatcg tcttgacacc tcttcgggaa gatgtagcct cttcaatac ccaagtggca	120
gagaaaaccag tgctcaactgc tgtgccagga atcacacggc acctgaccaa gcggcttccc	180
acaaagtcat cccagaaggt ggaggttagaa acctcagggta ttggagactc attattgaat	240
gtgaaatgtg cagcacagac ctggaaaaa agggttaaag ctaaaacccaa agtgaacgtg	300
aagccatctg tggttaaagt tgcgtcatcc cccaaattgg ccccaaaccg taaggcagtg	360
gagatgcacg ctgcgtcat tgccgcgtg aagccactca gtcgcagcag tgcctacag	420
gaaccccccag cccaaaaggc agctgtggct gttgtccgc ttgtctctga ggacaaatca	480
gtcaactgtgc ctgaagcaga aaatcctaga gacagtctt tgctgcctcc aaccaggatcc	540
tcttcagatt cctcaccccc ggaggtgtct ggcccttcct catccaaat gagcatgaaa	600
actcgccgac tcagctctgc ctcaacaagg aaagccccca ctctctgtgg aggatgattt	660
tgagaaacta atatgggaga tttcaaggag gaaaaattgg naactganat tgacctggat	720
tctggaaaaa gatgaagatg acccttccgg cttnngcct atcaannaaa ngattgnan	780
cctgaaaggg tggttaattga ngacncctt naaaaaaaaa atccnccaaa aaaactnnggg	840
ccttaanttc naccaaatttgc taacaatttgc acctgagaat gnttaatttgc ctttaggccc	899

<210> 251

<211> 755

<212> DNA

<213> Homo Sapiens

<400> 251

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tcaaataatg cggaacacga aacattgana nagacaagtg cttaaatat gaaacaaaat	120
tatTTTAA AAAAGCAAAA GAATAAAGAA TATATACAAA AGGGACCTGG AATCTGTAA	180
gtgattccaa aaacgaaata agtagaaaat ccatggtaa acctgaacat tctacctctg	240
cttggagaa gggctatcat acaacattca gtcagctgaa gatggattgg tagaggtgt	300
tctatacata aacttcagtc attttgctt gtgcagaatc atccaaatct tcccaagact	360
gaatggcag tcctgtggct ttcttcctt tccatattcc caacaaggct acgtgaagtt	420
caactcttga tgagccgctt acaacagcag ttccttagga gccaaatgaa caggtgggtc	480
agatttcctt atgagaaaca aaactggcca cctacagcaa aatatcaaaa tgggtaaatgc	540
cttccttcctt ctcccttcctg attatataca acatatctcc tttcaagac tattatcc	600
atcatgccta ntccctcaca aatctaaacc ttgaggtgt atgaaaggaa ccaacatcan	660
gaaaaagaaaaa ctcaatttgc aatgaagaa aacggggcang tatacaatttgc ancccccagag	720
caacccaata atccctgggc aaaagttcaa ttcaa	755

<210> 252

<211> 753

<212> DNA

<213> Homo Sapiens

<400> 252

cctacatcg ttttatttaa aacactaaca agtatttctc tttctgttaag ggcaaatgg	60
tcaaataatg cggaacacga aacattgact aatacaagtg cttaaatat gaaacaaaat	120
tatTTTAA AAAAGCAAAA GAATAAAGAA TATATACAAA AGGGACCTGG AATCTGTAA	180
gtgattccaa aaacgaaata agtagaaaat ccatggtaa acctgaacat tctacctctg	240
cttggagaa gggctatcat acaacattca gtcagctgaa gatggattgg tagaggtgt	300
tctatacata aacttcagtc attttgctt gtgcagaatc atccaaatct tcccaagact	360
gaatggcag tcctgtggct ttcttcctt tccatattcc caacaaggct acgtgaagtt	420
caactcttga tgagccgctt acaacagcag ttccttagga gccaaatgaa caggtgggtc	480
agatttcctt atgagaaaca aaactggcca cctacagcaa aatatcaaaa tgggtaaatgc	540
cttccttcctt ctcccttcctg gattatatac aacatatctcc tttcaagac tattatcc	600
atcatgccta ntccctcaca aatctaaacc ttgaggggtg atatgaaagg aaaccaacat	660
canagaaaaa aaaaactcaat tcaagaaaaat taagaaaaacc tggcaaggtt tacaatataca	720

cccccaggag catccaaat aatccctggg aaa

753

<210> 253

<211> 793

<212> DNA

<213> Homo Sapiens

<400> 253

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caaaaattatt	ttttaaaaaaa	gcaaaaagaat	aaagaatata	tacaaaaggg	acctggaatc	180
tgttaggnga	ttccaaaaaac	gaaataagta	gaaaatccat	ggtgaaacct	gaanattcta	240
cctctgctt	gganaaggc	tatcatacaa	cattcagtca	gctgaanatg	gattggtaaa	300
ggtgtgtcta	tacataaaact	tcagtcattt	ttgttgtgc	anaatcatcc	caatcttccc	360
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gaagttcaac	tcttgatgag	ccgcttacaa	cagcagttcc	tttaggagcca	acatgacagg	480
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taagtccttc	cttcctcttc	cncctgatta	tatacaanat	atctcccttc	aagacttatta	600
tttccatcat	gcttatttct	tcacanatct	aaaccttgan	gtgatatgaa	ngnnaaccaa	660
catcangaaa	agaaaactca	attcagnaat	gaangaaaac	tgggaggtat	ttaatanacc	720
ccangnnga	atccaaatac	cctggnaana	gttcaattca	antgtacngc	naaagnccat	780
aantaantat	tgg					793

<210> 254

<211> 625

<212> DNA

<213> Homo Sapiens

<400> 254

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tcaaataatg	cggaacacga	aacattgact	aatacaagt	ctttaaatat	gaaacaaaat	120
tatTTTTTaa	aaaagcaaaa	gaataaaagaa	tatatacaa	agggac	ctgg aatctgttaag	180
gtgattccaa	aaacgaaata	agtagaaaat	ccatgg	gtgaa	acctgaacat tctac	240
cttggagaa	gggctatcat	acaacattca	gtcagctgaa	gatggattgg	tanaggtgt	300
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gaatggcag	tcctgtggct	ttcttcctt	tccatattcc	caacaaggct	acgtgaagtt	420
caactcttga	tgagccgctt	acaacancaa	gttcttang	agccaacatg	acaggtgggg	480
tcangattt	cctatgagaa	acaanactgg	ccacctacag	caaaaat	aaaatggggt	540
aagtcc	ttcctcttcc	tcctgaatta	tatncaacat	ntctcc	ttt caagacnatt	600
antccatca	gggcttaatc	cttca				625

<210> 255

<211> 907

<212> DNA

<213> Homo Sapiens

<400> 255

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tggccaagcg	cgctcgccgc	tgcgacgctg	gcgggccccg	tca	gctagctagag cccgggctac	180
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tcctcaacga	atacggcgac	gacatgtatg	ggccagaaaa	gtt	taacagac aaggatcagc	300
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gtgacattaa	ggcatctaca	gagatgaggt	taagaagatt	ccag	tca gaaagtggag	420
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ccatctcagg cacatgcaga gcttttttag aagatatgaa aaaatatgca gaaacattt	600
tggAACCTG gtttaaagt ccaaacaag ggacattca gattgtgtac aaaatctcgaa	660
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aattcaatcn ccaagaaggt tggtnaanaa ncccctaang ggntccttca naggcnncaa	900
ctcaag	907

<210> 256

<211> 794

<212> DNA

<213> Homo Sapiens

<400> 256

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ctcctagcaa tagaaaaagt ttttttggaa tttcatcatt tacaatctt acaaatgcta	180
cagcatgaca aatatttagt aaaccttgg actcatcatt ctggatagag aagctgtac	240
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aaccttgac ctgagtcac ataaataccctt ctggagaagt tanctttcc ttaattaaga	660
caagaatttc ctgggtgtc cccttgggtt cactaaggat acttggaaagt ntntccagn	720
angactgaa gttttcaat caaccaanct ttttcaagaa aatgtccngt agtttcaang	780
gcctaaaaat gggt	794

<210> 257

<211> 885

<212> DNA

<213> Homo Sapiens

<400> 257

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cccctgcccc gcaagactact cagcctggcg gcgggaagcg caaaggcaag gctcagatg	120
tgctggccaa gcgcgctcg cgctgcgacg ctggcgcccc ccgtcagcta gagccgggc	180
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ttttggaaacc ctgggtttaa agctccaaac aaaggacat ttcatgtt gtaaaatct	660
cgaaataaca gtcatgtgaa tngagaaaga agttatcaga gaaattggca aggaatagtt	720
gtgcacccctc aattcagaaa attaaagggtt ggntctcaac caatccacag ttcacagntg	780
gtagttagaa atcaatcaaa acctgtcngt ttgcccgaan ttgnttggta aaagaattca	840
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<210> 258

<211> 798

<212> DNA

<213> Homo Sapiens

<400> 258

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atgtcaacat caggattct tttttttt ttaataacgc aaaatgactt atggagacaa	180
ccactgatgg ggcaccagga gtgttagatac cagacctctg gttatcgat atgatgtcac	240
aacattatat attggcctt gttctggcag gtccttagca atagaaaaag ttttcttga	300
atttcatcat ttacaaaatct tacaaaatgt acagcatgac aaatattgt gaaacctgtt	360
gactcatcat cctggataga gaagctgcta ctttcagtt aatgacacaa aacctttt	420
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<212> DNA

<213> Homo Sapiens

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<211> 772

<212> DNA

<213> Homo Sapiens

<400> 260

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<210> 261
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<212> DNA
<213> Homo Sapiens

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<212> DNA  
<213> Homo Sapiens
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<210> 263
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<212> DNA
<213> Homo Sapiens

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<212> DNA

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<211> 722	
<212> DNA	
<213> Homo Sapiens	
<400> 276	
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aaagttgaag tcaagtgatt ttgctgttct gaagcagttg ttgcctctgt tggagaaggt	300
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gtcagaaatc tggaaagcggtt accacagaac agctccaaga ggttntttg tcagcttat	660
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<210> 277	
<211> 805	
<212> DNA	
<213> Homo Sapiens	
<400> 277	
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gctcctcatt ttcctgaaaga agaatctcag cctgaaaagaa tatagagcta ggtgacatat	180
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gtcatgttaa aataacttt caccaggtag acatccttct ttcaatgcta gaggacagtg	300

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ngaagtttt	caagatgtca	tccaactcct	ccaaggggcca	actggggcat	gggagccttg	660
gcacgtcatn	cgggctccag	acacactacg	gtgcttcaac	aaggnggta	nagattcttg	720
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aagtacaaac	cacatgtttt	gggaa				805

<210> 278
<211> 1358
<212> DNA
<213> Homo Sapiens

<400> 278						
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aatttaagtc	tatccgttag	accatgaagg	agaagggttt	gctgggggag	ttcctgagga	180
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accctgcctt	gtccgtggat	gaggccacca	cagtatgcag	ggcatgtgca	ggagggcgcc	660
ctnaaccaggc	cccgtnntca	gggttacnt	cagcaacccag	cagggctccc	agcgggggag	720
cgggtgttct	ttgggggtgt	ggatagcagc	ntgtacacgg	ggcagatcta	ctgggcgcnt	780
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<210> 279
<211> 702
<212> DNA
<213> Homo Sapiens

<400> 279						
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attttatatc	tgcaaaaagca	attagacgct	accactgtat	aaaagaagga	aacagttact	180
caactccaaa	atatcattga	ggctaattct	cagcattacc	aaaaaaatat	taatagttt	240
caggaagagc	ttttacagt	gaaagctata	caccaagaag	aggtgaaaga	gttgatgtgc	300
cagattgaag	catcagctaa	ggaacatgaa	gcagagataa	ataagttgaa	cgagctaaaa	360
gagaacttag	taaaaacaatg	tgaggcaagt	gaaaagaaca	tccagaagaa	atatgaatgt	420
gagtttagaaa	atthaaggaa	agccacctca	aatgcaaaacc	aagacaatca	gatatgttct	480
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agaagataacc taaaaaagaa cttgaatctc aacacagtat cttaaaaaga tgagggtaac	600
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gtngaggttt tttccangna accggggaa gacctaaaaa gg	702

<210> 280
<211> 874
<212> DNA
<213> Homo Sapiens

<400> 280	
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aacagtgaga tctctgagca catggctctgt acctaacc caaaaatc accagggtct	120
agaatagttt ggcattttaaa taaaattgc taaatgaatg aaaaatccaa aataaatcat	180
gaagccattt ataaatcaca ccaatcttc ttgggttaaaa caatagaaag taacacttt	240
gaaagagaag gcaaacagggt gttagagggg caagaatgtg agctcgagga aaagacagct	300
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ctaagaagaa tctgtctaat taattgtgac aacatctgca aaaccatagt tacctat	420
ttcttccaac tctttactg aagacagagg atcattttt acagaaggtg atttgctaa	480
gaaatcctan attttacagg ggggaaaaaa aaacacnaaa caaaacaaaa accagaatca	540
gaattcattt tccataatga actggccatc ntgttaagca taanaaaaatc actatcaa	600
anaattccta cagaaaccaa ttggcaca gaatttccct tgtnacca gaaaattaat	660
actgaactta ctatgcata ggcattttact attaaaaaaaaaaa aaaaagtant aaccaaggcc	720
aaganaaaaca acctgaaaca ttaaatacat ntttataagg aaaaantaaa tgaattttaa	780
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gncttaccaa aatactaanc cttccccaa aacc	874

<210> 281
<211> 730
<212> DNA
<213> Homo Sapiens

<400> 281	
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ggcccaggct ctcgccacac atcctggan aactgccata ggcctagaa ggagggatga	180
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tggccccctgg gcagtccgccc agctcggaaag cactcaggc tggagcctgg gctctaagca	300
tggggcccaag gagccanaca ggagggagggc agcaggaang gctggcatgg aagggctgag	360
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agcttcttca ggaagcctcc aactgatcct catccttgc gcccacaaac ttgtccacca	480
cgtccccatt cttcatggcc agcacagtgg gcaccgctga cacccatac tcaatggcga	540
agtctgtgtg gtctntcaata tccacccctgg ccatcaccac cttccctgtgc tgcttggcca	600
ccatcttctc taacctccgn cccangatct tcagggtcca caccactgtg cgtggaaatc	660
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<210> 282
<211> 699
<212> DNA
<213> Homo Sapiens

<400> 282	
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aatttaagtc tatccgtgag accatgaagg agaaggcctt gctggggag ttccctgagga	180

cccacacaagta	tgatcctgct	tggaagtacc	gccttggtga	cctcagcgtg	acctacgagc	240
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taaacctggct	ctgtcccggt	ggattaaggc	caccacaagc	tatntagggc	natnngntc	660
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<210> 283
<211> 759
<212> DNA
<213> Homo Sapiens

<400> 283				
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tgtgagaacg	tgtgaaaaga cgatatcccc	gtttacacac aaattcaact	gattcacctg	180
ttctcgaaaa	aagcttctgt ttggctgtcc	accttaatgc tatgttataa	ttttccataa	240
tttctcgaaa	tattacacac ggatgtaaagc	attttggtgg ttctgaccat	tgtccatttc	300
tacatgttat	tcgcttgtta ccctcaagtt	gatacaagtt ctggcattgg	tactcaactg	360
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gagggggccc	acattttctt gttagaatctt	tgcattgagg tggttccgtc	cagttccat	480
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catgttacat	tactggctcc accattttgt	aatatgttgc acaagttta	gtccttgctc	720
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<210> 284
<211> 764
<212> DNA
<213> Homo Sapiens

<400> 284	ggaccgcgat gacgcagact ggagggaggt gatgatgcc tattcgacag aactgatatt ttatatgtaa atggatcctc cagctttcc accaaagcca cctaagccaa tgacttcagc agttccaaaca tgaatgaag gacagttctg tttctcttca ggatgcagaa tggtaactggg ggatatttc aaggaggagg gtaaatgaca aattgcggga tatgccagat gggaccttct tggtccgaga tgcccaaca aaaatgcagg gagattatac ttgactttg cggaaggggag gcaataataa gtaataaaag atctatcacc gggatggtaa atatggcttt tctgatccctc tgacattnaa ttccgtggtg gagctcatta accactatca ccatgaatct cttgctcagt acaatccaa acttgatgtg aagctgatgt acccaagtgt ccagatacca acaggatcag ttggtaaaag aagataataat tgatgcagta ngtaaaaaac tgcaagaata ccactctcaa gtatcaggag aagagtaaaag gagtatgata ngctgtatga agaatatact agaacatccc aaggaaatac agatgaagag gactgcaata gaaagcttt aatgaaaaca ttaaaatatt tggaaagagca ntgtcacaca caaggaacca acatnccaa agaatatatt gagnngattt cnccaaaanaa gggaaatga aaagggggan ttgaacgaaa ttta	60 120 180 240 300 360 420 480 540 600 660 720 764
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<210> 285
<211> 586
<212> DNA
<213> Homo Sapiens

<400> 285

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atccccacaa aaagaatgct attccncatc tcagagaaac aggcaggaag gacanaaggg	180
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ttggnctggc aacaaactgt ttgttggct tctgaacata atacttctc anagggaggg	360
gctgggtaaa tgctgaancc taaattatgt tggnaagaaa caaagtacct tcanttgaag	420
gttttttta acanctnggc tttaaattatt taaatgaaaan cccaagcctc cchnatttnc	480
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<210> 286

<211> 666

<212> DNA

<213> Homo Sapiens

<400> 286

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cctctgcagc cgacaggagc tgtacccagc tctgaaaagggt gtaaacacag ttttccactg	420
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gcagtgcacat gtcatttttggcgtcga tatcaagaat ggaactgaaa gacccctt	600
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<210> 287

<211> 782

<212> DNA

<213> Homo Sapiens

<400> 287

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tctcngggan anctgctctg ccgccaagat tgcattggg accaagggttc tcacaaaagg	660
gaaagtcac caagttcctc ccaatttcca atcacgaaac ttcaaccttg ccgttctgg	720
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<210> 288

<211> 707

<212> DNA

<213> Homo Sapiens

<400> 288

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gagggaaaga	ctgtcagta	attgtcacac	agaagaaaagt	acctgacaaa	ttattggatt	180
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ctactgtcc	atcaattgan	ttcaaaccctt	cagaaataga	aattgggagt	aatgacagtt	660
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<210> 289

<211> 673

<212> DNA

<213> Homo Sapiens

<400> 289

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aaaaaaaaacnc	gagagtactt	ctaaagcggc	cgcgggcccna	tcgattttcc	acccgggtgg	540
gttaccaggt	aagtgtccca	attcggcccta	taggggagtc	gtattacaat	tcacggggcc	600
gtcgtttta	aaacgtcntg	acggggaaa	accctggngt	taccaactta	atcccccttg	660
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<210> 290

<211> 573

<212> DNA

<213> Homo Sapiens

<400> 290

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ccatcaatat	ctgcttcnct	gatcatttca	tctacttctt	catctgttag	ttttcnccn	180
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gangggtcna	accctgcana	ggngccgcga	ancctccaan	cttttggttc	ccctttanat	540
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<210> 291

<211> 819

<212> DNA

<213> Homo Sapiens

<400> 291

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cacgtgtcga ggcagcaagt ctaggcggca gtggcaaagc ctactctgtt gttgcccag	180
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gtggcctgca gaagagact catgtactgc tggggcacag tgagcagaga ggtgcctgt	480
tccacgatgg cctggcaacc ctcagaacac cagccggagg cctggccgcc gatgaggaac	540
tcttcatatgc caatctgcca gtagagttcc tgggtgacan ggcgcaggta gatctggccc	600
gtgtacangc tgctatccac acccccaaag gacaaccgtt ccccccgtt gaggccctgt	660
ggttgcgtan gtaaacccctg aanacggggc tggtnaggg cgccctcctg cacatccct	720
gcataactgtg gtggcctcat ccacggncna aaccanggtt aggcaaggcc catgatgcca	780
tcaaactgccc ataacaaaatt tgtacaaggc tcaatccca	819

<210> 292

<211> 664

<212> DNA

<213> Homo Sapiens

<400> 292

ctcgcgctcg cgctgggtggc ggtcgctgg gtccgcgcg aggaagagct aaggagcaaa	60
tccaaagatct gtccaaatgt gttttgtgga gccggccggg aatgtcgagt cacagagaaa	120
ggggAACCCA CCTGTCTCTG CATTGAGCAA TGCAAACCTC ACAAGAGGCC TGTGTGTGGC	180
AGTAATGGCA AGACCTACCT CAACCACCTGT GAACTGCATC GAGATGCCTG CCTCACTGG	240
TCCAAAATCC AGGTTGATTA CGATGGACAC TGCAAAGAGA AGAAATCCGT AAGTCCATCT	300
GCCAGCCAG TTGTTGCTA TCAGTCCAAC CGTGTGAGC TCCGACGTG CATCATCCAA	360
TGGCTGGAAN CTGAGATCAT TCCAGATGGC TGGTTCTCTA AAGGCAGCAA CTACAGTGA	420
ATCCTAGACA AGTATTTAA AGAACCTTG AATATGGTGT TCTCGCCTGG ACTCCAAGTG	480
AATTCTGAA GTTGTGGGA ACANGAATGA AACTGCCATC AATATTACAA CGTTTCAGN	540
ACCAAGGGAG AACAAACAAGT TTGCTTAANG GGACTCCGT NGTTGATGCC TCTCAATTG	600
AACTGGTCTG GATGAAAAAT GCCTGATTGG GNAATTNAAG CTTCCAANT AGTTTCNCNA	660
AATG	664

<210> 293

<211> 719

<212> DNA

<213> Homo Sapiens

<400> 293

cacttaatt tctttattca tcaatagtat ccgaaaagga agaatcagga gttacaaaaaa	60
caagttaaat gcaatatana agcctactaa atacaaatac aagttcacaac acacatatgc	120
aacagaaact tggttanatt gtttcttcaa gtttgactac ttaaaaacat aggtgtaaag	180
gaaagacatt cagactggtc cacgtggct tggtagcagg canaggaacc ctgctttcca	240
aaaactgata tagtccaaag tcacggcatg tggaaatgtt tccatggaca ctggatctta	300
acagatgcta tagtgtttac aaaactacac acacagagaa agcccaagga agcctgcagg	360
ctaaggcccta tgctttaga gggctgaagg aaccaaacct agttaatcc tgggttttt	420
ctccatgcaa aactttatgg aagactcccc agacttaggtt atttagcagc ttccatgaat	480
ggtcctcaga tcatgtgatt ctacggcata nacgacagct gcccattttt cacagaagct	540
gcagaactca agaagaatgt ggatttgctc ttggganttc aatgttgagc ggtanantaa	600
tcttgggatg ataaccatgt tctaaatgac tagtgaanaa acctgtgggtt tcttgcttt	660
aacaaattgg tgtactcttg cccctccat aatgtccaaag ggctggtaa aacctttga	719

<210> 294
<211> 762
<212> DNA
<213> Homo Sapiens

<400> 294
agctaaggag caaatccaag atctgtgcc aatgtgtttg tggagccggc cggaaatgtg 60
cagtacacaga gaaaaggggaa cccacctgtc tctgcattga gcaatgcaaa cctcacaaga 120
ggcctgtgtg tgccatgtat ggcaagaccc acctcaacca ctgtgaactg catcgagatg 180
cctgcctcac tgatccaaa atccagggtt attacgtatgg acactgcaaa gagaagaaat 240
ccgtaaatcc atctgccagc ccagttgtt gctatcagtc caaccgtat gagctccgac 300
gtcgcatcat ccagtggctg gaagctgaga tcattccaga tggctgttc tctaaaggca 360
gcaactacag taaaatccta gacaagtatt ttaagaactt tgataatgtt gattctcgcc 420
tggactccag tgaattcctg aagtttgtgg aacagaatga aactgccatc aatattacaa 480
cgtatccaga ccaggagaac aacaaatgg cttaggggac tctgtgttga tgccctcatt 540
gaactgtctg gatgaaaatg ctgattggna actcagttc caagagtttcc tcaaagtggc 600
ctcaaaaaacc tcttcacacc ctccctgagaa agaagtgtgc cctgngaggg attaaacgta 660
atgcagatgg agnctgagac cnaagggtgga ccngttnacc gcctgtgtcc ggtgcccgg 720
ggaaatttggg tcnngtncag ccatgaaccc gttacgggaa ag 762

<210> 295
<211> 708
<212> DNA
<213> Homo Sapiens

<400> 295
cactttaatt tctttattca tcaatagtat ccgaaaagga agaatcagga gttacaaaaaa 60
caagttaaat gcaatataga agcctactaa atacaaatac aagttcacaa acacatatgc 120
aacagaaaact tgtttanatt gtttcttggaa gtttgactac taaaaaacat aggtgtaaag 180
gaaagacatt cagactggtc cacgtggct tgtagcagg cagaggaacc ctgctttcca 240
aaaactgata tagtccagag tcacggcatg tggaaatgtt tccatggaca ctggatctt 300
acagatgcta tagtgtttac aaaactacac acacagagaa agcccaagga agcctgcagg 360
ctaagcccta tgcttttaga gggctgaagg aaccaaacct agttaatcc tgttgtttg 420
ctccatgcaa aactttatgg aagactcccc agacttaggtt atttagcagc ttccatgaaat 480
ggtcctcaga tcatgtgatt ctacggcata gacgacagct gccctattta cacagaagct 540
gcagaactca agaggaatgt ggatttgctc ttgggagttc aatgttgcag ggtaaaagta 600
gtcctggatg ataaccatgt tccaaatgac taagtgaaga gacactgtgg gttcctgcct 660
ttaacaaaaa tgggggtact cctgccccctc ctccccanaa atgtccaa 708

<210> 296
<211> 652
<212> DNA
<213> Homo Sapiens

<400> 296
cactttaatt tctttattca tcaatagtat ccgaaaagga agaatcagga gttacaaaaaa 60
caagttaaat gcaatataga agcctactaa atacaaatac aagttcacaa acacatatgc 120
aacagaaaact tgtttanatt gtttcttggaa gtttgactac taaaaaacat aggtgtaaag 180
gaaagacatt cagactggtc cacgtggct tgtagcagg cagaggaacc ctgctttcca 240
aaaactgata tagtccagag tcacggcatg tggaaatgtt tccatggaca ctggatctt 300
acagatgcta tagtgtttac aaaactacac acacagagaa agcccaagga agcctgcagg 360
ctaagcccta tgcttttaga gggctgaagg aaccaaacct agttaatcc tgttgtttg 420
ctccatgcaa aactttatgg aagactcccc agacttaggtt atttagcagc ttccatgaaat 480
ggtcctcaga atcaagtgtat tctacggnat anacgacaaatg ctgcctatt tacacagaag 540
ctgcangaac tcaagaggaa atgtgggatt gccccctggg agttcaatgg ttcgcanggg 600

aaaagttant cttgggntga ataaccaggt ttctaaaatg accaaattga aa

652

<210> 297

<211> 879

<212> DNA

<213> Homo Sapiens

<400> 297

cactttaatt tctttattca tcaatagtat ccgaaaagga agaatcagga gttacaaaaa	60
caagttaaat gcaatataga agcctactaa atacaataac aagttcacaa acacatatgc	120
aacagaaaact tgtagttagatt gtttcttcaa gttgactac taaaaaacat aggtgtaaag	180
gaaagacatt cagactggtc cacgtggct tggtagcagg cagaggaacc ctgcttcca	240
aaaactgata tagtccagag tcacggcatg tggaaatgtt tccatggaca ctggatctta	300
acagatgcta tagtgtttac aaanctacac acacagagaa agcccaagga agcctgcagg	360
ctaagcccta tgctttaga gggctgaagg aaccaaacct agttaatcc tgtttggtt	420
ctccatgcaa aactttatgg aagactcccc agactaggct atttagcagc ttccatgaat	480
gtcctcaga tcatgtgatt ctacggcata gacgacagct gccctattta cacagaagct	540
gcagaactca agaggaatgt ggatttgctc ttggagttc aatgttgca ggtagaagta	600
gtcctggatg ataaccatgt tccnaaatga ctatgtaa gacactgtgg ttcctgcct	660
ttaacaaant ggtgtactcc ttgcctcct ccaatantgt ccaaagggt gtaaaaaacc	720
cttgattaa aggctgtctg cctgtttagt tcccccaangg nacttggac anggganccg	780
catttcaaga ccggAACAA ttgggagttt tgaaaaaagt tttaaatng ggaatgggtt	840
acataaaaaan gcttgaatg gctaaaacaa aggnngggaa	879

<210> 298

<211> 697

<212> DNA

<213> Homo Sapiens

<400> 298

aaagaatcg atatgaaggt gccaactgta agtttgaag tatctgaaag tgaatttgat	60
gtgaaaacaa ctatggaaag tatatcta atcgtctacgc agtctctcac agcagaaaca	120
aaggacatag ctttggacc taaggaacaa aaacatgaag acaggcagag caatacacct	180
tctcctcctg ttagtacctt ttcatcaggt acttctacca ccagtatgat tgaagttta	240
gatcatgaaa gtgtataaag tgagagctca gcgagctcga gacaagagac tacagattca	300
aatcaagtc ttcaacttgcat gcagacatct tttcagcttc tctctgcatt tgcttgct	360
aatataatc gtttagatga tttccaaaaa ctcactgaga gttgtgttc atctgtatgc	420
tttggaaagaa tagactcatt tagtgtacag tcattagata gcccggagtgt aagtgaatc	480
aattcaagat gatgaattgt caggcaaggg gatatgcatt agtgcctatt ataagttat	540
tcttcaactc caaaagtcta aaacagttga atctgccgaa gaaaaatctg aagaagtaaa	600
tgaaacatta agttataccca ctgaggaagc agaaatggg agaaaagtgg gcgaaaagtgg	660
caactcccg gttaacnngng aaaangcctg gatatcc	697

<210> 299

<211> 510

<212> DNA

<213> Homo Sapiens

<400> 299

aaaanaatnaa ttatgttaan aactttatta ttttncntc cttttaaang gntgtnaaat	60
aataacttcnt ccaaactcnt taaaatgtnt naangccntt gcnaaatcct tataaataaa	120
ttttcnccct tatccaancn catcnanaaa acattgaata tgttcaggtt tcncnggann	180
ggtncnccaaa ggnncncnt tttatacnga cttaaatgtt aaagcnggg gaaataaatt	240
ttccnatcna aatttttttt aagtttaat ctttccncn ttaaatttcn nanagtgtcc	300
gtgtactcc tacttttaaa ggaaaaaat tantttaaaa ttaatanc cccgatttaa	360

taatttttta cttaacncn taatgttcnt ttcctgaac nntaattaan aaatgttgaa	420
attttaatg tnaaanantc caantttccg tntgtaaca ttacncctcc aatgttcnta	480
ataatatntnt taaccncntnc caattatnga	510

<210> 300
<211> 625
<212> DNA
<213> Homo Sapiens

<400> 300	
attagatagc cggagtgtaa gtgaaatcaa ttcagatgat gaattgtcag gcaagggata	60
tgcttagtg cctattatag ttaattcttc aactccaaag tctaaaacag ttgaatctgc	120
tgaaggaaaa tctgaagaag taaatgaaac attagttata cccactgagg aagcagaaaat	180
ggaagaaaat ggacgaagtg caactcctgt taactgtgaa cagcctgata tcttgggccc	240
ttctcacacca ataaatgaag gacagactgt gttagacaag gtggctganc agtgtgaacc	300
tgctgaaagt cagccanaan cacttctga caaggaanat gtttgcata cagttgaatt	360
tctgaatgaa aaagcnggaa aaaagggang ctcagttatt atctcttagt aaggaaaaag	420
cacttctagg aagaagctt ttgatacctg aananatgaa atgttcacag tngaaaggaa	480
naanngcagt ancattccn tccttgaan gattnngtt actcaaagga attngnnnnaa	540
nccngtanta gaaaagttc aaacctaagn ccggnaaaag aggaagagat gcctggccta	600
aaaaaaaaagggaa aatccacnnga ccatt	625

<210> 301
<211> 792
<212> DNA
<213> Homo Sapiens

<400> 301	
aaaaantaaa ttatnttaaa aactttatta ttnncnatnc atttatagg gtantaaaat	60
aatactnctn caaaatcatt taaatnttcat tgatgccatt gcaaaatcat tataaataaa	120
tttnctccat tatccaatca catctaaata acattgaata tntacaggtt nctctggata	180
ggtaccaaaa ggtaccacnt tttatcacaa cttaaattgtg aaanctgggt gaaataaatt	240
tncaaataa aatttttttta aantttaaat catncactct ttaaatttca aacagtgtca	300
gtgtgacnct tacttttaaa ggaaaaaaat tagtttaaaa tttatantancc acanatttaa	360
taattttta ctttaacact taatgtacat tttcatganc agtaattaaa atatntgaa	420
attttaatn tgaaaaattt caaagttca gtatnttaac attacncttc aaatgttctt	480
aatatataata taaacactta caaattataa atacaactag ttgtntntct acaatacata	540
tntgaacacc atttttcttc tctagccatn tttatntgan gataaagtaa taaatctcg	600
tgctattcaa gggaaaaaaa atgaatgctt taaaaataa atctttaaaa aataattcca	660
aaaataaaatg tcaaataattt cacaaaaaata atttaactgt aaatattact ncntagtgta	720
aacaatttta aaaaaattttt acactctaca nttaatccnc ttctnattct tttaaaaat	780
tatggaaaat cc	792

<210> 302
<211> 738
<212> DNA
<213> Homo Sapiens

<400> 302	
aaagagtaaa ttatgttaag aactttatta ttttcgattc atttatagg gtagtaaaaat	60
aatacttctt caaaatcatt taaatgttat tgatgccatt gcaaaatcat tataaataaa	120
ttttctccat tatccaatca catctagata acattgaata tgtacaggtt tcnctggata	180
ggtaccaaaa ggtaccacat tttatcaga cttaaattgtg aaagctgggt gaaataaatt	240
ttcagatcaa aatttttttt aagtttaaat cattcactct ttaaatttca gacagtgtca	300
tggtgactct tacttttaaa ggaaaaaaat tagtttaaaa tttaatagcc acagatttaa	360

taattttta ctttaacact taatgtacat tttcatgagc agtaattaag atatgttgaa	420
attttaatg tgaaagattt caaaggtttc agtatgttaa cattactctt caaatgttct	480
taatataatat ataaacactt acaaattata gataacaacta gttgtatatc tacaatacat	540
atatgaacac cattcttctt ccccnagcca tatttatatg agggataaaag taataaatct	600
ctggtgctat tcaaggnaaa aaaatggaat gccttaaaaa aataaaatcc ttaaaagaata	660
ggttcaaaaa ataaagttca aaatanngc caaaaaataa attaachnngg taatattaac	720
tacataaggg taaaacaa	738

<210> 303
<211> 635
<212> DNA
<213> Homo Sapiens

<400> 303	
gaacggccga gggtaacatc ccgggctcgc gggaggctgt cgggtaatg gccacacgct	60
gacagaacca gccgagtggaa aaaggggagc gaagccgttc ctctgcaccc ttccccaggc	120
ctgaggcctt cccgcttgggt gctgcccgcc ccactgccc ctgaggaggg gcgatgagtt	180
ggttcaacgc ctcccagctc tccagcttcg ctaagcaggc cctgtcccag gcccagaagt	240
ctattgacag gggtctggac atccaggaag aggagccgag catctggcc gagaccattc	300
cgtatggaga gcccggaaata agttcccctg tcagtgaggat atgggataact tcaacctggg	360
gggttgaatc aaacactgaa cctcagagtc caccaatagc ctctcctaaa gcaatcacaa	420
agccagtcn gaggactgtg gtcgatgaat ctgaaaattt cttagtgcc tttctctcgc	480
caactgatgt ccagaccatt cagaagagtc cagtggtatc aaaacctcca ncataatcac	540
aacnaccang nagaangaan taaaancan cttacatgaa tccttgacca ttggncant	600
caagaaacctt cctgaaaacaa ctgaaatcac aaagt	635

<210> 304
<211> 847
<212> DNA
<213> Homo Sapiens

<400> 304	
gagacggagt ctttctctgt caccatgct ggagtgcagt ggcacaatct tggctcattg	60
taacccac ctcctcaggtt caagcaatgc tcctgcctca gcctcccgag tagctaggat	120
tacaggcgca caccaccacg ccaggctaatt ttttgtattt tttagtagaga tgggtttca	180
ccaaactgct ggccatgctg gtcttgaact cctgacatca ggtgatatgc ccgccttggc	240
ctcccaaagt gctgggatta caggcatgag ccacagcacc tggccgtaaa tgagagtttt	300
tatgtgcaag taaaggcagt taaataactt tcagtaataa aatgcacatcac aatatttcac	360
aggtttaaaa cacaacctgg ttacctttt gaataaaaata acattggaa gaaggcatag	420
ctacttttaa aagctattct atgcttcct tgggtttgaa atttcaagaa aaaataaaaat	480
gataaaatcac aaaattaaaa atgccaaattt caagttattt cctataattc ttccattttt	540
ttatgaatat tctgtatata caaacattca ttttaatgt gctaaaaata tgggtttaca	600
aaatatgaac aggtatattt taaaagagta aattatgtta aagaacttta ataantttcg	660
attcattttt tagggtaataact tcttcaaaaat caattaaatgt ttattgaatg	720
ccatttgc当地 aatcattata aataaatttt cncaattatc caatcacaat tctagataac	780
attgaataag tncaaggttt ccccgggata ngttccaaaa ngtnccaca attttatnca	840
gacctaa	847

<210> 305
<211> 767
<212> DNA
<213> Homo Sapiens

<400> 305	
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tgtcgggta atggccacac gctgacagaa ccagccgagt ggaaaagggg agcgaagccg	120
ttcctctgca cccttccccca ggcctgaggc cttcccgctt ggtgctgccg ccgccactgc	180
cggctgagga gggcgatga gttggttcaa cgcccccag ctctccagct tcgctaagca	240
ggccctgtcc cagggccaga agtctattga cagggttctg gacatccagg aagaggagcc	300
gagcatctgg gccgagacca ttccgtatgg agagccggga ataagttccc ctgtcagtgg	360
aggatggat acttcaacct ggggggttcaa atcaaacact gaacctcaga gtccaccaat	420
agcctctcct aaagcaatca caaagccagt tcggaggact gtggtcgatg aatctgaaaa	480
tttcttcagt gccttctct cggcaactga tgtccagacc attcagaaga gtccagtggt	540
atcaaaacctt ccaacaaaat cacaacgacc aagaaagaag aagtaaaaag caacttacat	600
gaatcccttg cacattggcc aatcaagaac tcctgaaaca actgaatcac aagtaaaaag	660
actccctcct ttgtgtttc aagggaaaaa ctctggccaa caaggtactt catcacctaa	720
aactgaaagg naaacaacga agaaaactgt ttaatnaaag aatccgg	767

<210> 306

<211> 1659

<212> DNA

<213> Homo Sapiens

<400> 306

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tgtcgggta atggccacac gctgacagaa ccagccgagt ggaaaagggg agcgaagccg	120
ttcctctgca cccttccccca ggcctgaggc cttcccgctt ggtgctgccg ccgccactgc	180
cggctgagga gggcgatga gttggttcaa cgcccccag ctctccagct tcgctaagca	240
ggccctgtcc cagggccaga agtctattga cagggttctg gacatccagg aagaggagcc	300
gagcatctgg gccgagacca ttccgtatgg agagccggga ataagttccc ctgtcagtgg	360
aggatggat acttcaacct ggggggttcaa atcaaacact gaacctcaga gtccaccaat	420
agcctctcct aaagcaatca caaagccagt tcggaggact gtggtcgatg aatctgaaaa	480
tttcttcagt gccttctct cggcaactga tgtccagacc attcagaaga gtccagtggt	540
atcaaaacctt ccaacaaaat cacaacgacc aagaaagaag aagtaaaaag caacttacat	600
gaatcccttg cacattggcc aatcaagaac tcctgaaaca actgaatcac aagtaaaaag	660
actccctcct ttgtgtttc aagggaaaaa ctctggccaa caaggtactt catcacctaa	720
aactgaaagg naaacaacga agaaaactgt ttaatnaaag atcgatatg aaggtgccaa	780
ctgtaaagttt gaaagtatct gaaagtgtaa ttgatgtgaa aacaactatg gaaagtatat	840
ctaatacgtc tacgcagtct ctcacagcag aaacaaagga catagtttt gAACCTAAAGG	900
aacaaaaaca tgaagacagg cagagaata caccttctcc tcctgttagt acctttcat	960
caggtacttc taccaccagt gatattgaag ttttagatca tgaaagtgtgataaagtgaga	1020
gctcagcggc ctcgagacaa gagactacag attcaaaatc aagtcttcac ttgatgcaga	1080
catctttca gcttctctct gcatctgctt gtcctgaata taatcgttt gatgattcc	1140
aaaaactcac tgagagttgc tgttcatctg atgcttttga aagaatagac tcatttagtg	1200
tcacgtcatt agatagccgg agtgtaaagtg aatcaattc agatgtatgaa ttgtcaggca	1260
agggatatgc ttttagtgcatttattatgtt attatgttcaac tccaaagtct aaaacagttg	1320
aatctgctga agggaaaatct gaagaagtaa atgaaacatt agttatacc actgaggaag	1380
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ttgaatttctt gaatgaaaaa gcnngaaaaa agggangctc agttattatc tcttagtaag	1620
aaaaaagcac ttcttaggaag aagctttt当地 atacctgaa	1659

<210> 307

<211> 831

<212> DNA

<213> Homo Sapiens

<400> 307

ctaaggatTCATATTGGAA GAAGAGATTt CTACACATGA AAAAATGCC TTTGTtTAGT 60

aaatcacaca	aaaatccagc	agaaaattgtg	aaaatcctga	aagacaattt	ggccatTTTg	120
gaaaagcaag	acaaaaaagac	agacaaggct	tcagaagaag	tgtctaaatc	actgcaagca	180
atgaaaagaaa	ttctgtgtgg	tacaaacgag	aaagaACCC	caacagaAGC	agtggctcag	240
ctagcacaag	aactctacag	cagtggcctg	ctagtgacac	tgatagctga	cctgcagctg	300
atagactttg	agggaaaaaa	agatgtgacc	cagatattta	acaacatctt	gagaagacag	360
atagggcactc	ggagtcctac	tgtggagttat	attagtgtc	atctctat	cctgtttatg	420
ctcctcaaag	gatatgaagc	cccacagatt	gccttacgtt	gtgggattat	gctgagagaa	480
tgtattcgac	atgaaccact	tgccaaaatc	atccctttt	ctaattcaatt	cagagatttc	540
tttaagtacg	tggagttgtc	aacatttgat	attgttcag	atgccttgc	tacttcaag	600
ggatttacta	accagacata	aagtgttgtt	agcaagactt	cttagaaacaa	aattacgaca	660
ctantttga	agactatgag	aaattgttc	agtctgagaa	attatgttac	caagagacag	720
tccttaaagc	ctgctaaggg	aactgattct	ggaccgtcan	aactttgcc	tcaangcaaa	780
agtttatcaa	caagccnggg	gaaaccggaa	acncaaggag	gaacctcctt	c	831

<210> 308
<211> 833
<212> DNA
<213> Homo Sapiens

<400> 308

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gagacgactg	actgtgacag	gggcccggga	gctttcaag	gggcccTTT	cttcaagtct	180
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taaatcctt	aaagtagcaa	aggcatctga	agcaatatac	aatgttgaca	actccacgtt	660
acttaaagaa	atctctgaat	tgatttagaaa	aagaggatga	ntttggccaa	nttgggtcaag	720
tcgaatanat	tcctctcaag	cataaaaccc	caaacgttaa	gnnaaaccgg	tgggggcttc	780
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<210> 309
<211> 1320
<212> DNA
<213> Homo Sapiens

<400> 309

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gttcctctct	ctccctcccc	tccccaccc	gttcccctct	catggctgac	cccccctctgg	180
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gtgaactgag	ccttggtaac	agcgcCcagg	aaagataacc	gctggaggaa	ccaggaacgg	300
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gtgtctcagc	cggcgtatcg	gacgagtcag	tggctggaga	cagtgggtgt	tacgaggctt	420
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tgggtgcgac	ccgaattcag	attgccc	atgtatgtga	gaagaataag	caatttgcaa	540
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tgcctggacc	taggcccagc	aatagatcc	cccaatgcca	gtgcaactaa	gagaagggtt	1140
ccactggaa	ggctgagaac	ccctctccct	atgggttctc	tacaggcaaa	aaggcaatgt	1200
aaccttagtac	gatggttccc	agaattcctt	tcgaatttgc	catttcgttt	cccatgaatc	1260
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<210> 310
<211> 1030
<212> DNA
<213> Homo Sapiens

<400> 310

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ccaaaatgac aggttcagca ccacccccctt ctccaacacc taacaaagag atgaagaaca	180
aagcaggttt ttgcaaacct ttaacaatga caaaagctac ttactgtaaa cctcacatgc	240
agacccaaatc ttgtcagaca gatgatactt ggaggacaga atatgttcca gtgcctatcc	300
ctgtgcctgt gtatatccca gttccatgc acatgtacag tcagaatatt cctgttccta	360
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cagagttgt tacaatgacg gatatgatga gtgaagacga ggggaaaaca gagacaacca	540
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acccagagac acagtccagc atgcctgatg taccatatga accaagattt ggatatcgaa	660
atagattttc ccagagctgc tgaggagctt gatatggaaa atgaattttt attaccacct	720
gtttttggcg aagaatatga ggaacagccc aagacctcga tctaaaaaaaa aaggagccca	780
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gcagcnntcc tttcaaaatta tacgtatggg cgtaaatgca tgggnnaacac cgggtcaaaaa	900
actaagnnnac ttggatgaaa gatcntccgg gnaatttagaa tgagttaaaa tccttccaaa	960
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qqqggttaacc	1030

<210> 311
<211> 546
<212> DNA
<213> Homo Sapiens

<400> 311

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gctaaaataa	aaagcacaga	aggaaaaaat	aattgatttg	tacataagct	aaattataat	180
tcctttaaaa	ttgtttataa	caagatggaa	tacagaatga	cgatttagatt	tataacgtgt	240
gtttatatga	atatgttgtt	aacagtgaga	tttctgatat	ggtataacaa	agtatatgtat	300
tggaggacct	gcaaaatgta	tactcgggtt	gttttcttt	ttaaaaatata	tgtnaaacag	360
gcaagtgagg	cttaacagcga	ttatggttca	ttacngggtt	tgggnatat	accttttca	420
gcttctgtta	tgagcaagtt	gtgtttcaa	tccccacttt	caatgtctat	gggaaggcgc	480
cnttttgctn	tgttttgttt	tgtctttaaa	ncnttttnaa	acnggggaca	canatggang	540
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<210> 312  
<211> 518  
<212> DNA  
<213> Homo. Sapiens
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<400> 312

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ctggaaana attgggtct ggaataaaanc tncaaatggg tcnccngctt cactaaaacc	180
ttggcaacta aggctcattt ttccaaaggg gttnctnang tcnnccttct ntinaatcnt	240
tttattatnc cagggtggct gttgctaang cttnngtggg aaancangaa ntnctgctn	300
ctnctgctgc tggtgctgct gggcantnca agggaaaacc cccccgacaa actgggataa	360
ngtacactgn ttgcncacnt ctngggccct attnccntac ctgnccctgna aatncttccc	420
nctctgcccc cttaactnnt gccaannctt tcccccccgg ttaggataaa aattccccctn	480
aacctccnac ctgggttan cgggggtccc ctnccccc	518

<210> 313

<211> 660

<212> DNA

<213> Homo Sapiens

<400> 313

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gtgcttcaga agctgctgca tttgacagtg acgaatcgga agcagtggtt gcgaccggaa	180
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gacactctag tggtaatga ggtgttctgg gtatccatgt cctatccaag cccttcacca	420
agaagacctt aagagtcgtat gtctgtacca ccgacaggag ccatctggaa aaagtgcctg	480
ggaggcgccc aaatnagcct ggcggaggct tgccggcttg ggggaaaagt cgactcgctn	540
gtacaacctt ctcaagctaca aatacttggaa gaaacaagac aangggactc aagccantgg	600
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<210> 314

<211> 516

<212> DNA

<213> Homo Sapiens

<400> 314

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aggctgctta gcccacccag cctatcacac tgcccgctcc acgttggca gccacataaa	180
aacacgtcac agctcaanaa natccgttga tgcacctctg aatccccccc aatggtttct	240
gtgcattttt ttaatattgt acaaaaatatg ttaacttagga aaaatttagct gtactgtgac	300
aagtgcggga cgtccattt ggattaccgt ccccccaggca ttacttctta ttgcagtaag	360
acctctaaaa ggtggagctg tncaaaccaa aaaaaatcta aacgattta agaanagcag	420
caactcaata ctgcttttagt tcatttaat ttctttccc aaaaatacac tcctaaatat	480
acaaaactata caatcttatt attttaatgc tggttt	516

<210> 315

<211> 677

<212> DNA

<213> Homo Sapiens

<400> 315

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aaatttggtc tcaaaaacaaa tatactcatt tcaaagaact tccaaactt ctccactgtg	180
cagaaaatt tggcttaaag aacctggcta ttcatttgct tcaatgttca ggagcaacct	240

gggcatctaa gataaaaat atggagggtt cagacccac acatattgct gaaaggcatg	300
gtcacaaga actcaagaaa atcttcgaag actttcaat ccaagaaatt gacataaata	360
atgagcaaga aaatgattat gaagaggata ttgcctcatt ttccacatat attccttcca	420
cacagaaccc agcattcat catgaaagca ggaagacata cgggcaagag tgcaaatgga	480
gctgaggcaa atgaaatgga agggaaagggn aaacagaatg ggntcaggca tggagaccaa	540
acacagccca ctaagaggtt ggcagtgaga gttctgaaag accagtatga tgacttgtan	600
gtgttcaatc cctggngct gattcaagaa aaataattcc acaagggtgc tattcnntngt	660
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<210> 316

<211> 843

<212> DNA

<213> Homo Sapiens

<400> 316

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gtcttaatac aaaggtaggt tatgaaaatg tatattaatt tgagatatag aaaagtttc	180
aaataataat gtttcaggg ttatatgcaa atagacacta aataagacaa ggtttctgca	240
aacatgtatgt aacaataatg actggaactc tgaatgtgag aaattcagaa aatgaaccag	300
ctacttaaaa agaaaaatg tgctaagtaa atttgttatt tcatacggtt tctaaggaga	360
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ttttatagt aatataccca tatgaagcag gtataatgag aataaatttt gccaataaca	600
aattctgaaa tctgaanttt gtttctgctg tcatagtatg aattcgctt aaagananca	660
ggcaatccaa attcaacttg ctacactgaa aacaaaatgt ccgtanatcg tgagttcata	720
taataaaccc ctaatgatc ttctgcaca naaaccataat tctttcaac ttgggtcaa	780
caagaaccta ttgctgaatt ttcatataaa actatttcct gttggcagtt tcctaccccc	840
gga	843

<210> 317

<211> 835

<212> DNA

<213> Homo Sapiens

<400> 317

acaagacacg cctgcgtagt ggtagtgcctt tcctgcagtc ccagtctagt actgaggacc	60
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cttcaaaggc atctcaggag gatgccaatg aaatcaagtc taaacggat gaagaagaac	180
gagaacgaga aaggagggag aaggagaggg aacgagaaag agaacgggag aaggagaagg	240
agagagaacg agagaagcag aagctaaaag agtcagaaaa agagagagat tctgctaagg	300
ataaaagagaa aggcaaacat gatgatggac gaaaaaagga agcagaaatt atcaaacaat	360
tgaagattga actcaagaag gcacaggaga gccaaaagga gatgaaacta ttgctggata	420
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gggacaagat agaataccta cagaagaagc taagccatgg gcaagcagga agaagaagca	660
ctcctctctg aaatggatg tcacaaggcc aagccttga agacatgcag gagcaaaaat	720
atccgnnttg attgcagcaa nttgccggga anaanggatg atgccaattt ttcaagccc	780
aatgtcaaaa gccgtttca agttccaaat ccagntcatt naagnttgcctt taaaa	835

<210> 318

<211> 582

<212> DNA

<213> Homo Sapiens

<400> 318

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canagctcac caagttcncc cggtatcaaa ttccanaat acccacaaga tttcttccacc	180
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attnaaaatt antcnantcc caagaaattt aaagacttga agtagtagag cattcaaaac	300
ttaaataact ttaacaagaa agccanctga tcttaacaag ttacnncngcn antaaatggg	360
aaatagactg aatcanccta nacataattt cattagggnt gcaaaccacc cangggaaag	420
tagcacaatt ataccanttt gtaatccaca ttacaagaa gtttgcnaa caaatgaaga	480
aaactttng cccatagaca acttatttt taaaatatca ctccccaaaa gtagccatgt	540
ttccactttt ggtccccctt ccanatcaaa aataccaact tg	582

<210> 319

<211> 827

<212> DNA

<213> Homo Sapiens

<400> 319

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gatggttcag aaagacggga taatgactca tatataaaatg ttcaagaaat aaaactgttg	120
atggaaataa ttaagcttat taaagacaaa agaaaggatg ttagtttgcg aaacattggc	180
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tacncctaac gtttacattt caaagggacc ctgaaaaagac ccncctgggtt caatgaccaa	780
cnttcanggg ncccacgaan tggctgaaaa agggatgggc aatttag	827

<210> 320

<211> 598

<212> DNA

<213> Homo Sapiens

<400> 320

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cttcaaggac attattacgg atacacaatg ccctctgaaa gctttgcaa atgacagaaa	180
atactgaaga tgaccagagg ctcaggtgtt aaggatgcat tttccatgtt ttccaaacagc	240
acacaaactc cttacaaaaa acaagcttacat ctagatggtc ccacgagctg gtcatcttca	300
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ctctcctgtg acagagctcc tttccgggt catcacattt gctctgacac gtgggnagcc	540
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<210> 321

<211> 808

<212> DNA

<213> Homo Sapiens

<400> 321

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gttcctctct	cttcctcccc	tccccaccc	gttcccctct	catggctgac	cccctcctgg	180
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<210> 322

<211> 629

<212> DNA

<213> Homo Sapiens

<400> 322

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tacattgcct	ttttgcctgt	agagaaccca	tgaggagagg	ggttctcagc	cttcccagt	180
gaacccttct	cttagttgc	ctggcattgg	gggatctat	tgctgggcct	aggccaggc	240
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gctgctcctg	ccctcctgccc	tcttcctcaa	ctccactgt	gtctgttcca	acagagcaag	360
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<210> 323

<211> 798

<212> DNA

<213> Homo Sapiens

<400> 323

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acccagagac	acagtccagc	atgcctgat	taccatatga	accagattt	gatatcgaa	660
tagatttcc	cagagctgct	gaaggagct	tgatatggaa	aaatgaat	ttattaccaa	720
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ggagccaagg agaaaagg

798

<210> 324

<211> 754

<212> DNA

<213> Homo Sapiens

<400> 324

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tctcttaca taaccttata aggcttcgt aactaaaatg	taaaacccaaa caaaaacaaa	180
ccccaaaaca aaacaaaaac cccagctat tagttacag	tttattttaa aaattccgaa	240
agacactgca agttctaac ttttagtagt gctaccata	cacaaccatc tggtaagaa	300
cccagtaaaa gagccccctt ccaaggaagc ttgcacacag	tagagttgtg caatatggat	360
gtttcttact acaagaaaaa aattatacat ggacattct	cattcatatt ctgtatgt	420
aaaagttaca aacataccta atcaaataaa taataataaa	aaaagaattt gaatgtattt	480
gttaagtatc ctaaaaaccac tacatagaat aatggcaact	ttcactcaca gattatttac	540
atggtaatac ccagcgtggg tacactgcta caaaactcaa	aacagaagga gtaaacttga	600
aatgttttcc ataataaaga tctagcanca tgactatcct	aatgcgttt tatcccgaat	660
gcttctggca acgttccctt ttaatccggt gtctcatcca	attcaaaaan tggccttac	720
aaaaaaaaat cctttacaa gaaagaaacc cgtt		754

<210> 325

<211> 854

<212> DNA

<213> Homo Sapiens

<400> 325

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aaaaatgtca ggaattggaa ataaaagagc agctggagaa	cctggcacct ccatgcctcc	120
tgagaagaag gcagctgtt aagattcagg gaccacagt	gaaacaattt agcttaggagg	180
tgtctctca acggaggaac tagacattag aacactgcaa	acccaaaatc gcaagctggc	240
agaaatgtt gatcagcggc aggccattga agatgaactt	cgtgagcaca ttgaaaaact	300
ggaacgacga cagggcactg atgatgcctc actattgatt	gtcaaccatc actggagtca	360
gtttgatgaa aacatccgta tcatccttaa acgttatgat	ctggagcagg gcttggaga	420
cctactcaca gaacgaaaag cccttgggt gcctgaacca	gaaccagact ctgatagcaa	480
tcaggagcgt aaagatgacc gagagagagc agttccatgt	aagagatgga gtctcagctg	540
caggaacgtg tggagtcttc ccggcgagcc gtgtcccaga	ttgtgactgt ttatgataaa	600
ttgcaagaaa aagtggagct cttatccgg gaagcttaaa	agtggagat aatctgatag	660
tggagggaaag canttgcaag gagctgaact ctttcctcgc	acaaggagaa tattaaggct	720
acanggaatt gacaagatct tcctcaggaa aaggcatcgc	aaccatggtc tcaaggngtt	780
cctccaaagt tgcaagaggt aaaattgggg naaaagccga	attcaccaan tttccgggcc	840
tggaaagtccca anga		854

<210> 326

<211> 760

<212> DNA

<213> Homo Sapiens

<400> 326

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catagctcac caagttctct ccgtatcaaa tttccagaat	acccacaaga tttcttcacc	180
agctcagtcc tgactcaacc tcttcaatct ttatcatt	agaagacaaa gggtcattt	240
atttaaaattt attctatgtct caagaaattt aaagacttga	agttagttagag cattcaaaac	300

ttaaaaataact ttaacaagaa agccagctga tcttaacaag ttactctgct agtaaatggg	360
aaatagactg aatcatccta gacataattt cattaggct gcaaaccacc caggggagag	420
tagcacaatt ataccatttt gtaatccaca ttcacaagaa gtttgctaca caaatgaaga	480
aaactttgtg cccatagaca acttattttt taaaatatca ctccccaaaa gtagccatgt	540
ttccactttt gttcccttt ccacatcaa aataccaact tgatttctc aggaggaatg	600
gacaatccaa gtttatacaa gtgggctggg aaaaagaaaa cactgaaaag tctaaaagca	660
caagataaac aaaggctggg aagggaagac agttaaaggt tattgttcc caantcaatc	720
cnaaaaacca anggcttgta attaacaagt ccttcgcgc	760

<210> 327

<211> 852

<212> DNA

<213> Homo Sapiens

<400> 327

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ccctgtgcct gtgtatatcc cagttcctat gcacatgtac agtcagaata ttcctgttcc	180
tactacagtt cctgttcctg tgccagttcc tgttttctg cctgctccat tggacagcag	240
tgagaagatt cctgcagcaa ttgaggagct aaaaagcaag gtttcttcag atgctttga	300
tacagagttt cttacaatga cggatgtat gagtgaagac gagggggaaaa cagagacaac	360
caacatcaac agtgtaatta ttgaaacaga tataatttgt tcagaccttt tgaagaactc	420
tgacccagag acacagtcca gcatgcctga tgtaccatatac gaaccaagat ttggatatcg	480
aaatagattt tcccagagct gctgaggagc ttgatatgga aaatgaattt ttattaccac	540
ctgttttgg cgaagaatat gaggaacagc ccaagaccc tc gatctaaaaa aaaagggagc	600
caagagaaaan gctgtatcaa ggataccaaag tctcatgtatc ataagtctga caatttcaga	660
atgcagcnntt ccttcaaat tatacgtatg ggcgtaaatg catgggnaac accgggtcaa	720
aaactaagnn acttggatga aagatcncc gggnaattag aatgagttaa aatccttcca	780
aatccantra agttaaaag agggtnaat cccctcaaaa ccanagctgg ngccttaaca	840
agggggttaa cc	852

<210> 328

<211> 799

<212> DNA

<213> Homo Sapiens

<400> 328

aaaaggcacac taaggttta ataagggaa caaaaaattt ttttcaccag catagattca	60
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tctctctaca taaccttgcata aggcttcagt aactaaaatg taaaacccaaa caaaaacaaa	180
ccccaaaaca aaacaaaaac cccagctat tagtttacag tttttttaa aaattccgaa	240
agacactgca agttctaaac ttttagtagt gctacccata cacaaccatc tggtaagaa	300
cccagtaaaa gagccccctt ccaaggaagc tttgcaacag tagagttgtg caatatggat	360
ttttcttact acaagaaaaa aatttacat ggcacattt cattcatatt ctgtaatgtt	420
aaaagttaca aacataccta atcaaataaa taataataaa aaaagaattt gaatgtattt	480
gttaagtatc ctaaaaccac tacatagaat aatggcaact ttcactcaca gattattac	540
atggtaatac ccagcgtggg tacactgcta caaaaactcaa aacagaanga gtaaaacttga	600
aatgtttcc ataataaaaga tcttagaaca tgactatcca atgctgtttt atcccgattt	660
cttctgcacac gttccctttt atccgtgtt catccagttc anaantgtcc ttatcaanaa	720
taacctttac tagaagaaac cgtncaagca tatttcaan gggttccgg tccaattgaa	780
gttanacgtn taccaaaca	799

<210> 329

<211> 978

<212> DNA

<213> Homo Sapiens

<400> 329

ggaagatggc ggccggccgtt ccacagcggg cgtggaccgt ggaggcagctg cgca	60
gactgc	60
ccaa gaaggacatt atcaagttc tgca	120
gaca	120
cata attattagga aacattaaa atgtggccaa gacagcta	180
tggttacagc ctataaccat cttttggaaa actaagcg	240
ttaagggtac taaa	240
agtaaagtgt ctgagcaagt aaaaaatgtg aagcttaat	300
gaagataaac ccaa	300
caagtctgaa gagaccctgg atgagggtcc cccaaaat	360
actaaatcct gttctgaaa	360
agggagataa aaccaactt cccaaaagg gagatgttgc tcactgctgg	420
tata	420
cactacaaga tggactgtt tttgatacta atattcaac aagtca	480
aaga	480
atgccaagcc tttaagttt aaggtcgag taggcaaa	540
tgtcagga tggatgaa	540
ctcttttgc tatgagtaaa ggagaaaagg ctgcactgga	600
gattgaacca gaatgggctt	600
acggaaagaa aggacagcct gatgccaaa ttccnccaaa	660
tgcaaaactc acttttgaag	660
tggatttagt ggatattgtat gaaatagca gtgc	720
tctaggata ttagcaacaa	720
tgataaaact tggccttggaa gaaatttacn caactagtta	780
gaacttggta ctattgtaaa	780
ggaagagtc actggaaaat tcaaggagtt aataaaattt	840
gttacttgg tcccagctt	840
tgagagataa atccctttagt aatccctggt ctaaaataact	900
ttcctacagc tggtaaaat	900
actggtcaag gagaactt tcccttacc tcatgttgc	960
aacttaagtgc gctcaataaa	960
aattgatccn ctgtcttg	978

<210> 330

<211> 1017

<212> DNA

<213> Homo Sapiens

<400> 330

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caggagacct ggaccagacc acgatgtgga aacgctggct	120
cgccgtcg	120
ctgggtccgc gcccggaaag agctaaggag	180
caaataccaag atctgtgcc	180
atgtgttttgc tggagccggc cggaaatgtg cagtcacaga	240
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ggcaagac	300
acctcaacca ctgtgaactg catcgagatg cctgcctcac	360
tggatccaaa atccaggttgc	360
attacgatgg acactgc	420
aaaat gagaagaaat cctgttgc	420
atctgc	420
ccagttgttt gctatcgtc	480
caaccgtgat gagctccgac	480
gtcgcatcat ccagtggctg	480
gaagctgaga	480
tcattccaga tggctggttc tctaaaggca	540
gcaactacag taaaatccta	540
gacaagtatt	540
ttaagaactt tgataatggt	600
gattctgccc tggactccag	600
tgaattcctg aagtttgg	600
aacagaatga aactgc	660
ccatc aatattacaa cgtatccaga	660
ccaggagaac aacaagg	660
tttagggact ctgtgttgc	720
gctctcattt aactgtctga	720
tgaaaatgtt gattggaaac	720
tcagcttcca agagttctc	780
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cgangtggac	840
tgtgtctgtt cctgtggaaa	900
ttgggtctgt cagccatgac	900
ctgtgacn	900
agaatcaga	900
agggggccca gacccagacn	960
gaggangaga tgancngata	960
tgccaggag	960
ctccaaagct	960
taggaaacag ctgaaaaga	1017
nccagagagg gagccccc	1017
aaagattatg aggaggc	1017

<210> 331

<211> 799

<212> DNA

<213> Homo Sapiens

<400> 331

cccagaaaaga tcatcacagt ttctgtaaaaa	60
gaagatgtac acctgaaaaa ggcagaaaaat	60
gcctgaa	60
gaa	60
caagccaaaa acgagac	120
acgac	120
caagccatg atcccc	120
aaaaa cattaaaacc	120
caggagcttt ttagaaaaagt	180
tcaaggatata	180
tgacaccaca	180
gatgttcaat	180
caactgatga agcaagtgtc	240
aggacttact gttgacac	240
ggagcggct	240
gaaaggagtt	240

attgacctgg tctttgagaa ggctattgtat gaacccagg ttctctgtggc ttacgcaaacc 300
 atgtgtcgat gtctagtaac gctgaaagta cccatggcag acaaggctgg taacacagt 360
 aatttccgga agctgctact gaaccgttgc cagaaggagt ttgaaaaaaa taaaggcagat 420
 gatgtgtct ttgagaagaa gcagaaagaa cttgaggctg ccagtgtcc agaggagagg 480
 acaaggcttc atgatgaact ggaagaagcc aaggacaaag cccggcggag atccattggc 540
 aacatcaagt ttattggaga actctttaaa ctcaaaaatgc tgactgaagc catcatgcat 600
 gactgtgtgg tgaagctgct aaagaaccat gatgaagaat ccctggagtg cctgtgtcgc 660
 ctgctcacca ccattggcaa agacttggac tttgaaaaaaa gccaaagcca cgtatggacc 720
 cagttacttta atcagatggaa gaaaattgtg aaaggaaaga aaaacctcat ctaggatcg 780
 gtcatgtttt caggaggtt 799

<210> 332
<211> 881
<212> DNA
<213> Homo Sapiens

<400> 332
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tggcggtcgcc ctgggtccgc gccggagggag agctaaggag caaatccaag atctgtgcca 180
atgtgttttgg tggagccggc cggaatgtg cagtcacaga gaaaggggaa cccacctgtc 240
tctgcatttga gcaatgcaaa cctcacaaga gcctgtgtg tggcagtaat ggcaagacat 300
acctcaacca ctgtgaactg catcgagatg cctgcctcac tggatccaaa atccagggtt 360
attacgatgg acactgcaaa gagaagaaat ccgttaagtcc atctgcccgc ccagttgttt 420
gctatcagtc caaccgtgat gagctccgac gtgcgcattcat ccagtggtcg gaagctgaga 480
tcattccaga tggctgggttcc tctaaaggca gcaactacag tgaatcccta gacaagtatt 540
ttaagaactt tgataatgggt gattctcgcc tggactccag tgaattccctg aagtttgg 600
aacagaatga aactgcccattt aatattacaa cgtatccaga ccaggagaac aacaagttgc 660
ttaaggggact ctgtgttgc gctctcattt aactgtctga tggaaatgtt gantggaaac 720
ttagcttca agaagtttctt caagngccctt naaccatct tttaacccctt tttgagaagaa 780
tgtgccttgc gaggatgaaa cgtatgccatggagcttgc aaancgaggt ggactgtaaan 840
ccgttggnccttgg gggnccttgg gaaaatttggg tcttggacaa g 881

<210> 333
<211> 810
<212> DNA
<213> Homo Sapiens

<400> 333
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atgcctgcctt cactggatcc aaaatccagg ttgattacca tggacactgc aaagagaaga 180
aatccgttaag tccatctgccc agcccgatgg tttgtatccatca gtccaaaccgt gatgagctcc 240
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gcagcaacta cagtgaaatc cttagacaatggtttaagaa ctttgataat ggtgattctc 360
gcctggactc cagtgaatttgc tggaaacccatggg tggaaactgccc atcaatatttca 420
caacgtatcc agaccaggag aacaacaatggttgc tggaaactgccc atcaatatttca 480
ttgaactgtc tgatgaaaat gctgatttggaa aactcagctt ccaagagttt ctcaagtgcc 540
tcaaccatc tttcaaccctt cctgagaaga agtgtgcctt ggaggatgaa acgtatgcag 600
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tgtcagccat gacccgtgttgc ngaaagaatc agaaggggggc ccagacccatggggc acngaggang 720
agatgancng atatgtccatggg gagctccaaa gcttaggaaa cagcttgaaa aganccagag 780
agggagcccc caaagagatt atgaggaggtt 810

<210> 334

<211> 808

<212> DNA

<213> Homo Sapiens

<400> 334

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caagttaaat	gcaatataga	agcctactaa	atacaaatac	aagttcacaa	acacatatgc	120
aacagaaaact	tgttagatt	gtttcttcaa	gtttgactac	ttaaaaacat	aggtgtaaag	180
gaaagacatt	cagactggtc	cacgtggct	tgttagcagg	cagagaacc	ctgcttcca	240
aaaactgata	tagtccagag	tcacggcatg	tggaatgtt	tccatggaca	ctggatctta	300
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ttggattaag	gcgtgnctgc	ttgggagttc	ttccaaggca	ctttggacca	ggAACCTGC	780
atttcaaact	ggaccaagtg	gaggtttg				808

<210> 335

<211> 758

<212> DNA

<213> Homo Sapiens

<400> 335

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aggctaaaat	agaagaacaa	gaagagcaaa	ggaagggtcca	gcaactcatg	accaaagaga	120
agagaagacc	agggtccag	agagtggacg	aaggtgggtg	gaacactgta	caaggggcca	180
agaacagtcg	ggtaactggac	ccctcaaaat	tcctaaaaat	cactaacct	acaattgtatg	240
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gagcaaaggc	aagtgagact	gatgccttac	ggtcaagtgc	ttccagttt	aacagattt	360
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cccgaaggac	cttaactagt	cgtggaaagta	tggcaggga	gaagaatgac	aagcccttc	480
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acaatcagtc	tcaagaagag	cagcggagag	agatgctgga	gaccgtgaag	cagctnacan	600
gaggtgttga	tgtggagagg	aacagccttgc	agctgaaccg	aaataaacaa	gggagtcagc	660
aaaaccccgaa	aantcagca	atgtcagctt	attgacaagg	gttGattatc	agaagaggac	720
tgganaggaa	gtccaaatct	atcatggtna	attttttc			758

<210> 336

<211> 785

<212> DNA

<213> Homo Sapiens

<400> 336

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ctgagtcaat	ttctttttgt	ttttttaat	atttggttcta	tgtatttaca	agccttaaag	120
ttgctctaaa	gatttcaaga	gtattaagag	tacttttctc	aggtagcac	tttttttttt	180
tttaaacaat	tcttggagtt	ctgtggtcca	cagcatttcc	ttctgtttca	atgttatgta	240
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agatttgcgt	ccaaaaaaaaaa	aaaaatctt	cttaccttgc	tcaccccaaa	ctttctcaaa	360
tctggactaa	atgtataacc	ttaaaaacaaa	catgagggnc	atcttgcagg	ggagggaaat	420
ttatTTCTCT	gtttttctat	tatacaagtt	gtttacagaa	actgcaaattt	aaaaaattac	480
actggcattt	gcagtccctt	aaataaatta	aaagttctca	actttttttt	ttttgctaaa	540

catttttta agtatgagtc cttgttaaa aagaaaagat taaaacagaa aatatttct	600
ataaaatacnt gnattttggg tttagggtc cccgcctaa ggnttgaagg ttactttat	660
cccaggaccc ttttcctcc atggAACCC ttttttcnc tttccctt tcccacttcg	720
ngccnccnt nggggtttc tggcaaaaaa tggcccttgc tgcnctgggg aattggccaa	780
aaacc	785

<210> 337
<211> 643
<212> DNA
<213> Homo Sapiens

<400> 337	
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gatgtccaa gaaggacatt atcaagttc tgcaggaaca cggttcanat tcgttcttg	120
cagaacataa attatttagga aacattaaaa atgtggccaa gacagcta aaggaccact	180
tggcacagc ctataaccat cttttgaaa actaagcgtt ttaanggtac tgaangtnta	240
nntaaagtgt ctgancaagt naaaaatgnn aancttantg aagataancc caaagaaaacc	300
aagtntgang agaccctgga tgagggtcca cnnaaatata ctaaatctgn tctgaaaaag	360
ggagataaaa ccaactttcc caaaaaggga gatgttgttc actgctggta tacaggaaca	420
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gccaagcctt taagtttaa ggtcgagta cgcaaaagtt atcanaggat ggggatgaag	540
ctctcttgac tatgagtaaa ggagaaaagg ctngactgga aaatggaccc aaaatggctt	600
accggaaaga aagggacagc ctgatnccaa aatttccccca aat	643

<210> 338
<211> 831
<212> DNA
<213> Homo Sapiens

<400> 338	
caagacagng gatcaatttt tattgagcca cttaagttt caacatgagg taaaaggaaa	60
aagttctcct tgaccagtat tttacacagc tggtagaaag tatttttagac caggattca	120
taagggattt atctctaaa agctggacc aagtaaaca attttattaa ctccttgaat	180
tttccagttt acttttcctt tacaatagta acaagttcta actagttng taaatttctt	240
caaggccaag ttttatcatt gttgctaata tccttagagc tgaagcactg ctatttcaat	300
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gctgtccctt cttccgtaa gcccattctg gttcaatctc cagtcgagcc ttttctcctt	420
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aacttaaagg ctggcattt ttcttcttct ttgcacttgt ttgaatatta gtatcaaaaa	540
cagtcccatc ttgttgtt cctgtatacc agcagtgaac aacatctccc ttttggaa	600
agttggttt atctccctt ttcagaacag gatttagtat atttgggg accctcatcc	660
agggtctttt cagacttggg ttcttgggt ttatcttcat ttaagttca cattttttac	720
ttgctcagac actttactta tacttcttgtt acccttaaaa ccgcttaagt ttcaaaaaag	780
agggttatag gctgnaaccc aaggggggcc ttggtnagct ggccttggc c	831

<210> 339
<211> 758
<212> DNA
<213> Homo Sapiens

<400> 339	
ccaaacatgtc ccgtggttcc agcgccgggtt ttgaccgcca cattaccatt ttttcacccg	60
agggtcggtc ctaccaagta gaatatgctt ttaaggctat taaccagggt ggccttacat	120
cagtagctgt cagagggaaa gactgtgcag taattgtcac acagaagaaa gtacctgaca	180
aattatttggaa ttccagcaca gtgactca tattcaugat aactgaaaac attgggttgt	240

tgtatgaccgg	aatgacagct	gacagcagat	cccaggtaca	gagggcacgc	tatgaggcgag	300
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<210> 340
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<212> DNA
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ggtaagtggc atcacggatc tggtaaaacta acgacaatgt ttagtctctc tctgttagag	180
caacaaggtg agcatcaatc tctgtttctg taanaatcct gaatttagga ttttcaactg	240
tcaactactcc aacttctatt tctgaagggt tgaaatcaat tgatagaaca gtagacaggc	300
atgttaattgc agtttccact gtctgttcaa atgtccaatc aaatttcttc ttcaactttt	360
tttcaaggaa gctgggttgc tcaggttgtt taactcccg tgcagtggct ttaaaacccac	420
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agtttagctgc ctcatagccg tgcccttctg tacctggat ctgctgtca gtcattccg	660
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nccaataatt tggcaggnac ctttctttct ggggngacaa ttactggccc agtctttcc	780
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<212> DNA
<213> Homo Sapiens

<400> 341	
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<210> 342
<211> 906
<212> DNA

<213> Homo Sapiens

<400> 342

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<210> 343

<211> 875

<212> DNA

<213> Homo Sapiens

<400> 343

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tgcacatcac tggcagagaa	ctgagtc	aaatagctga aacctttgga cttcaagaaa	180
attatataaa aattgtcata	aataagaagc	aactacaact agggaaaacc cttgaagaac	240
aaggcgtggc tcacaatgtg	aaagcgatgg	tgcttgaact aaaacaatct gaagaggacg	300
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<210> 344

<211> 629

<212> DNA

<213> Homo Sapiens

<400> 344

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cgcgtatcc atcctgtctt	cagtcagtgc	ttctggaaag ggagggaaaag tcttggatgc	180
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tcccactggg cacacatcta	cagaggatg	cgtggcgcag tgaggacggt tactgtgg	300
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aacaacaaca aagaaaaccc	acaaaaaacc	tggagaaaat atatctaaat ctctgtatagg	420

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aatgctgaat	atatataaag	cctgccactc	aatctttgaa	tttcnnggggg	cgcaatttta	600
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<212>	DNA					
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gcaaatinctg	acttcatttg	tgtttaaac	acgattatat	gaattttct	tttttaatta	300
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<213>	Homo Sapiens					
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tcaacataaaa cttgcttgg ctggcttctc catcctcata caaccaattt tcagtatctt	600
ccagtttcaa agtaaaaactg ttacgancat nttcactnnnc aaacttctca tattcnccac	660
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<210> 348

<211> 862

<212> DNA

<213> Homo Sapiens

<400> 348

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<210> 349

<211> 832

<212> DNA

<213> Homo Sapiens

<400> 349

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aacaaaatta tttttttaaa aagcaaaaga ataaagaata tataaaaaag ggacctggaa	180
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acatcangaa aagaaaactc aattcagaaa tgaagaaaac tggcaggtat acaatacacc	720
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<210> 350
<211> 782
<212> DNA
<213> Homo Sapiens

<400> 350

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cngatnccaa aaccnaaata agtaaaaaan ccangggaa nccngancat tcnacctnnng	240
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tcaggctnat tccttcacaa atntaaacct tgagggata tgaaggaaacc caacttcngg	660
aaangaaaac tcaattcana aattgaagaa acctggcagg tataacaatac ccccccaaggn	720
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<210> 351

<211> 775

<212> DNA

<213> Homo Sapiens

<400> 351

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ttagaccaca ggagttgaca tcactaaat tcaagtcaag agatgtgaga ccatgagaga	180
gaagcacatg cagaaacagc aggagagggaa aaaatcagtc ttgacacctc ttcggggaga	240
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<210> 352

<211> 865

<212> DNA

<213> Homo Sapiens

<400> 352

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<210> 353
<211> 875
<212> DNA
<213> Homo Sapiens

<400> 353	
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<210> 354
<211> 705
<212> DNA
<213> Homo Sapiens

<400> 354	
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<210> 355
<211> 862
<212> DNA
<213> Homo Sapiens

<400> 355

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<211> 750

<212> DNA

<213> Homo Sapiens

<400> 356

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<210> 357

<211> 725

<212> DNA

<213> Homo Sapiens

<400> 357

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 <211> 756
 <212> DNA
 <213> Homo Sapiens

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 <212> DNA
 <213> Homo Sapiens

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<211> 831

<212> DNA

<213> Homo Sapiens

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<212> DNA

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<211> 826

<212> DNA

<213> Homo Sapiens

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<210> 370

<211> 783

<212> DNA

<213> Homo Sapiens

<400> 370

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ttaatttgtc cacatctaaa tgtttctaa ggaacaaact actgaggcat tgcataaga	240
cgagagttgc aaacatagta ccataactga atatttaaa ttacatctt acaaaggcta	300
ggagtagtga ctccctcaca cacccagag aatgtcttag agagtaaccc catagaacat	360
tgtatggctt caacagaaac ttcaggattt tcttccacac tgagctactg ccctcaaca	420
aactttctca ctccctgaca ctatcttctg tgcaattt tgcattttctt cttaatcaag	480
gagcttgag aaacaatgct ttggcccaa tgaccctt gttccctt aa ctacagatct	540
ataggagaaa tgcaaaagca gttcccttca tgacccat gacatgtgc ttcagagtgc	600
aagagctaga gagctaaatc atgtgaatgg ttacctctgn ctacctatct gcttanggt	660
tatccatca ngattcattc taggattcta ttaccttgg gggtaatg gacatgttag	720
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tgc	783

<210> 371
<211> 793
<212> DNA
<213> Homo Sapiens

<400> 371
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caccaaggcat ccctccaggta atgtcaagac ctgttagctc ttccctccatt tccactccct 180
tgccccccaa tcaaataact gtatttgcata cttccaatcc catcacaact tcagctaaca 240
catcagcaggc tttgccaact cacttgcagg ctgcatttgcgt gtcaacagtt gtcacaatgc 300
ccaatgcggg tagcaagggtt atggtttgcagg agggacagtc agctgctcag tctaatttccc 360
ggcctcaggta cattacaccc gtctttatca attcatcctc aataattttag gttatgaaag 420
gatcacagcc aagcacaatt cctgcagccc cactgacaaac caactctggc ctgatgcctc 480
cctctgttgc agttgttggc ctttacaca taccttcgaaa cataaaaattt tcttctgctc 540
ctgtaccggcc taatgcctc tccagtagtc ctgctccaaa catccagaca ggtcgaccc 600
tggtecttag ctcacgagcc acccctgttc agcttccttc ctttttgnatcgttnc 660
agttgccctt ctnatcccctt gtgcaacaag tggaaagaatt gaatnccat gangctagcc 720
ctnangtgaa caccttaaca gatcagacac tttttccctt tncagtcac cccaatgggt 780
tcttccctt tga 793

<210> 372
<211> 804
<212> DNA
<213> Homo Sapiens

<400> 372
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cccactactg ctattcacac acagtacttc cacggcacaa tacatttagga gatctaaaaa 180
tgctcaccct gtactctagg ctgttttagga aatgtgaaaaa ctagtaacat ttataatggc 240
attagctcct ttcaataacaa gacaacattt tagaaacattt gaacctcaac tcgcaacacc 300
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gctcaaaatt gcttttgta aaagtccacac acattttccaa gtatcaagtc gcagtcctgc 480
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ccacagttgg ctttcagttt cgggagtttcc ttccggctgg gatttggact tttcaactat 660
ctctttggcc tcactgtttt gtccagagac tatggcagaca tttacccctt ctttggctg 720
gcaacagang cctgcaatgc tgnggggttga agttccctttt gagactaaat tctggcgacn 780
gggctttgtt gggggtaaag ttct 804

<210> 373
<211> 792
<212> DNA
<213> Homo Sapiens

<400> 373
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cgaggacag cttccctggcc gcccggagg cccggcccaaa ggctgaagcc gacgttagctt 180
ctctgaacag acgcattccag ctgggttgcgg aagagtttgcata tcgtgcccag gagcgtctgg 240
caacagctt gcaagaagctg gaggaagctg agaaggcagc agatgagagt gagagaggca 300
tggaaagtcat tgagagtcga gccaaaagg atgaagaaaa aatggaaatt caggagatcc 360
aactgaaaga gcaaaaggcac attgctgaaatc atgcccggaccg caaatatgaa gaggtggccc 420

gtaagctgg	catcatttag	agcgacctgg	aacgtgcaga	ggagcgggct	gagctctcag	480
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taatggctgc	agaggataag	tactcgaga	aggaagacag	atatgaggaa	gagatcaagg	600
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aactaaantt	ggagaaaaag	catttgatga	cttagaagaa	gaaagtggct	tcatgccaa	720
agaagaaaan	cttatatgca	tcaanatgct	ggatcagact	ttactggagt	taaaccacat	780
gtgaaaaact tc						792

<210> 374
<211> 745
<212> DNA
<213> Homo Sapiens

<400> 374						
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tccaaactgca	tggccacag	caatgaataa	tcttggaatg	gcaccgctgg	gaattgccgg	120
acaaccaatt	ttacctgact	ttgatcctgc	tcttggaatg	atgactggaa	ttccaccaat	180
aactccaatg	atgcctgggt	tggaatagt	acctccacca	attcctccag	atatgccagt	240
agtaaaaagag	atcatacact	gtaaaagctg	cacgctctc	cctccaaatc	caaatctccc	300
acctcctgca	acccgagaaa	gaccaccagg	atgcaaaaaca	gtatttgtgg	gtggctgccc	360
tgaaaaatggg	acagagcaaa	tcatttgga	agttttcgag	cagtgtggag	agatcattgc	420
cattcgcaag	agcaagaaga	acttctgcca	cattcgctt	gctgaggagt	acatggtgga	480
caaagccctg	tatctgtctg	gttaccgcat	tcgcctgggc	tctagtactg	acaagaagga	540
cacaggcaga	ctccacgtt	atttcgcaca	ggctcgagat	gaccgttatg	agtgggagtg	600
taaacagcgt	atgctagcca	gagaggagcg	ccatcgtaga	agaatggaag	aagaaagatt	660
gcgtncacca	tnttcaccccc	cagtgtcac	tattnagatc	atgaatgcag	cattggtgct	720
aaaaaaaataa	aaggaggatt	ccaaa				745

<210> 375
<211> 734
<212> DNA
<213> Homo Sapiens

<400> 375						
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atttacaaaag	tattttgtg	aaataactctc	cattggctt	gcttgctcag	tacattctt	120
tatcttcaat	ttagactcaa	gggagggat	gcttgcatta	ttataaatac	cacaaccacc	180
accacacaca	ataaaagacca	tctctgcctc	aggacattcg	ccccaaacct	ccatcccttc	240
tgtttacttt	ccaccaagca	gaagttctg	aatggtccac	tcacatgctg	ccattgcgat	300
ttgccgatgg	gcactaccaa	ggtgtctctg	gcaattcgca	ctccaggtgg	agctgaccta	360
ttttagaaaa	gcctcacaaa	ccctagctca	ttattnattc	attgattcat	tactataat	420
acttatatac	agtctttgca	aacattcagc	atgaagtaaa	catagtattt	acagcagtagc	480
tcggtttgca	attcaacaca	ctgacaaacag	aagcaaagg	accaacagac	tgtaagaagg	540
ccagagggga	aagaatatta	atataaattcc	cttctgccac	tgtgtgccgt	gccgtgtgt	600
tgtttgtcg	tgtgtgccca	cacatgagca	tattnaatt	cacagaaaaaa	ctgaaacatg	660
ccctccttta	aaagcagact	atttacaagt	gattctgaat	agcatgaaca	catgccagnc	720
atactggaaa	cttg					734

<210> 376
<211> 822
<212> DNA
<213> Homo Sapiens

<400> 376						
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accacacctga caagcaacag gttcaactcc tggcagagat gtgtatcctt attgatgaaa 120
 atgacaataa aattggagct gagaccaaga agaattgtca cctgaacgag aacattgaga 180
 aaggattatt gcatcgagct tttagtgtct tcttattcaa caccgaaaat aagcttctgc 240
 tacagcaaag atcagatgct aagattacct ttccaggtt tttacgaat acgtgttgta 300
 gtcatccatt aagcaatcca gccgagctt aggaaagtga cgcccttggc gtgaggcgag 360
 cagcacagag acggctgaaa gctgagctag gaattccctt ggaagaggtt cctccagaag 420
 aaattaatta tttaaacacga attcaactaca aagctcagtc tgatggtac tgggtgtAAC 480
 atgaaaattga ttacatTTTt gggtgagga agaatgtAAC tttgaatCCA gatcccatt 540
 agattaaaag ctattgttat gtgtcaaagg aagaactaaa agaacttctg aaaaaaggcag 600
 cccagtggg aaattaagat aacgccatgg tttaaaattt ttgcagcgac tttctcttt 660
 aaatggtggg ataactaaa tcatttgaat caagtttggt gaccatgag aaaatatacn 720
 gaatggggaa tatgttaggt aatggattac ccgaaaaan ttatctgnntt aacaaactta 780
 gaaaggcttt ttncccttta aattaagttc tatcattaaa tt 822

<210> 377
 <211> 812
 <212> DNA
 <213> Homo Sapiens

<400> 377

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 tacaattttt aacattaata tacacattcc ataatctcat ctatttaaca ttaacacagg 180
 cctttgttgt tgttatTTTt ttctccctac aatatttccct gactctgttag gacagtggc 240
 ctcagttggg ggttgcactt gtccccctagg ggcattctggc aacatccggc ataactgtgg 300
 gtgtcacatg agagggacgc tgctcaccat cctgcaatgc acagcacaga ccccaccaca 360
 ggggtttat ccagccaaa tgtcaacagt gtcagttt agcaactt accgagttggg 420
 actcaattcc cattttatga acacctctgt gtcactgtt attctgaaaa cacagacttt 480
 gctaacttgtt aaatactatt tacaagaaga ttcaacctaa tcaatatcac ttatcaaaag 540
 cagtggctga ctgttaagtat caacatgtt ccagaatgaa taaaccacac aatcaactca 600
 gaatgataca aatttagggc catatcattt aatttccctt gaacctgctc tgctaggta 660
 atctgctaattt atgaaaagtta attaagactg gtgggttggg accgaggaca atagtttccct 720
 ttgcacaattt ttctgaacta tgagaaaaat ttaaaggatc cttaaagcnc ctggcaaaaa 780
 gccaaggccc tttgcaaaagg gcttccggaa aa 812

<210> 378
 <211> 870
 <212> DNA
 <213> Homo Sapiens

<400> 378

aaaatTTAAG ccaactctta ttcaactttt cttcttcaca gcagctgttt atagatagta 60
 gggagccaaag aatgaaggac agtaacagat ggaaagcaaa aagtacaaca gctatctaa 120
 gttcagctct caacattgct gggttgcattt ggaacccaaa cctcttaaca actggcagat 180
 aatagctaaa tcttaacaga caaagaagaa atatttctt tgggacagct gctatctaga 240
 agaaaaaccaa ggtcccttaa tatagtctaa atataatgtg tggcttattt tagagaaatc 300
 ttttagcaacg taagtttac cagtaagtgt cacaactgat caacagtact taaaaggaaaa 360
 caaaacaaaaa tcacacttagc cacaatttc caccatatac acatgaaatt aattttaatc 420
 tgTTTGTACT ccttgacact aactgatcat taatgaaata tgatatggaa agatcacaga 480
 gtagaaaaaca agcaaagatt agtttataca acagtgcata tatacatcag agggaaaaca 540
 tgctagctaa tgcaacatta aggccctgaat gtaaggcatc cccaaagtccac agaagcccc 600
 aagaactcct aaattacaaa ttcatcacat tacatgcattt caatggtcac ttttggTTA 660
 cccataaaaag gatacncagt attttgcgtt aaataccagg accacatttta caatatatgc 720
 aaaaaatttag aatgcagngg taagntcctt anatttaagc cctcatatgn gncaacaggg 780
 gaaaattcca ttatTTTta agaaaggaaa aanggagacn gggatataaa tactcgggaga 840

aattccccga attaagaagn aacctctgca

870

<210> 379

<211> 837

<212> DNA

<213> Homo Sapiens

<400> 379

gaggagaggt caaccgtcgt	agcgccaata acttctactc	catgatccag tcggccaaca	60
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aggagaagtt caagcaggcc	ctttctggaa ttctcattca	atttgagcag atagtggctg	180
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acatcagcgt gtggtcaaaa	caagctgagg aaattcgc当地	cattcataat gatgaattaa	300
tggaaatcag gcgagaagaa	gaaatgaaaa tgtctgtatga	tgaaaatagaa gaaatgacag	360
aaacaaaaga aactgaggaa	tcagccttag tatcacagggc	agaagctctg aaggaagaaa	420
atgacagcct cggtggcag	ctcgatgcct accggatgaa	agttagaactg ctcaagcaag	480
aacaaggcaa agtccacaga	gaagatgacc ctaacaaaaga	acagcagctg aaactccctgc	540
aacaaggccct gcaaggaatg	caacagcata tactcaaagt	ccaagaggaa tacaaaaga	600
aagaagctga acttggaaaaaa	ctcaaagatg acaagttaca	ggtggaaaaaa atgttggaaa	660
atcttaaaga aaaggaaagc	tgtgcttcta ngctgtgtgc	ctcaaccag gatagcgaat	720
accctnttga gaaagaccat	gaacagcagt cctatcaaaa	tcttgaaccg tgaagcactg	780
gttagtgggg gattatcttc	cacanttcct tcatggcac	cccatttgga gccagcc	837

<210> 380

<211> 793

<212> DNA

<213> Homo Sapiens

<400> 380

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agacacaatt ttttttaatt	ttcatgaagt ccaatttgc	tatttttttt cttttgtgc	180
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ggtagccttgc taaaagtca	actgatcata cattttattt	atttccggcc tccctaattt	480
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tccatcttta ttatataaaa	tcatgattac aagtcatac	tataatatta tattttatac	600
ttttccaaat cttccatagc	attgnngttct tcttccacta	aaaagcagac cgtttagagg	660
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cagctataga gttcataatg	gcccggaaagg gtaaagactg	caggncgctt aatnccagg	780
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<210> 381

<211> 807

<212> DNA

<213> Homo Sapiens

<400> 381

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gatgtttgac aaggatgttag	taatgctca gacaggtgtc	tccatgatgg atccaaatca	180
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gcctatggct catagtgaat tggtaaagtc ttacctgaa gatgagaaca aggagactgg	480
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aagggcagaa cagttccaagg cagaagaagc gcaacggaaa ttgaaaagac naaatagaga	660
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tgtggAACCA taaangata tgcctgg	807

<210> 382
<211> 800
<212> DNA
<213> Homo Sapiens

<400> 382	
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cagtcaatgc caaccagtgt ctgattggct tctgtgtcat gtccaaatttc ctctgtgaca	180
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tcttatagca tctctttca cttcttagaa atcttttac tttcactggt accggcacca	660
acntttcaat cagggattt antatctcac tattttcttt gaaaaaggca aatggagggtt	720
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<210> 383
<211> 1203
<212> DNA
<213> Homo Sapiens

<400> 383	
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tctgaggagt ccgtctcccg cctcccgag gagatccgga gactggagga agagctccgc	180
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ctgtgaataa caggtggctt ttcatggatg tctctagtca gagaaaaatg ataaaggc	tt	1140
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<210> 384		
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<212> DNA		
<213> Homo Sapiens		
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caagttcccc taagttctta gaggactgct ttgcctttt atctgagagt tgcaaagttc		120
cataaagaat ggcccttgtg gataagcaca aagtcaagag acagcgattt gacagaattt		180
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<210> 385
<211> 804
<212> DNA
<213> Homo Sapiens

<400> 385

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<210> 386

<211> 782

<212> DNA

213 Homo Sapiens

<400> 386

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<210> 387

<211> 865

<212> DNA

213 Homo Sapiens

<400> 387

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<210> 388

<211> 753

<212> DNA

<213> Homo Sapiens

<400> 388

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aaattaaaat canaattcta aaagtgtanc anctttgtt tttttaatn gactnanctn	240
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<210> 389

<211> 737

<212> DNA

<213> Homo Sapiens

<400> 389

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<210> 390

<211> 775

<212> DNA

<213> Homo Sapiens

<400> 390

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<210> 391

<211> 776

<212> DNA

<213> Homo Sapiens

<400> 391

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<210> 392

<211> 909

<212> DNA

<213> Homo Sapiens

<400> 392

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 <211> 769
 <212> DNA
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<210> 394
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 <212> DNA
 <213> Homo Sapiens

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 <211> 762
 <212> DNA
 <213> Homo Sapiens

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<210> 396
<211> 822
<212> DNA
<213> Homo Sapiens

<400> 396							
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<210> 397
<211> 812
<212> DNA
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<400> 397							
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<210> 398
<211> 751
<212> DNA
<213> Homo Sapiens

<400> 398

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<210> 399

<211> 800

<212> DNA

<213> Homo Sapiens

<400> 399

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<210> 400

<211> 810

<212> DNA

<213> Homo Sapiens

<400> 400

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gacttgtaca	caaacttgg	ggatttgata	atattgaaag	tggagctgtt	tggaaacaag	300
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cttataaaaa	atnctnatnt	ggctntnggg	agtactgtac	atcagccaa	attgaatttc	420
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ggaatataat	accaagagaa	gaaaagccta	ttgaggatga	aattgaaaaga	aaagaaaata	600
ttaagccctc	tctgggaagt	aaaaagaatt	tattagaatc	tatacctaca	cattctgatc	660
aggaaaaaga	agtacattt	aaaaacccnga	agacaatgaa	aatctgggc	gaccaagatg	720
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810

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<210> 401  
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<212> DNA  
<213> Homo Sapiens
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<400> 401

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cccagctaga gctagcagat ataaagtcca agcttgagaa ggtggcccg cagaaacaag 180
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<210> 402

<211> 779

<212> DNA

<213> Homo Sapiens

<400> 402

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tacaggcgcc	cggccaccacg	cctggcta	tttttgtatt	tttagtagag	attgggttcc	180
accgtgttag	ccaggatggt	ctcgaactcc	tgacctcg	atctgtccac	ctcgccctcc	240
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cagcttctag	tttaaacagc	atgtgggtt	tcagaggag	gaccatggag	agctacatgt	360
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atattttaaa	ggctggttnt	ggctagagga	ggatgggca	anatgtgaca	gggangaaaa	660
gcatgcctta	tgaggaatga	cttaaaggga	ctagaggtaa	cagcagctca	aaagtaagaa	720
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<210> 403

<211> 1443

<212> DNA

<213> Homo Sapiens

<400> 403

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actgaatctc aaaaagattt ggaaataacc aaagaaaatc tggctcaagc agttgaacac	180
cgcaaaaagg cacaaggaga attagcttagc ttcaaagtcc tgcttagatga cactcaaagt	240
gaagcagcaa gggtccttagc agacaatctc aagttaaaaa aggaacttca gtcaaataaa	300

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gacaaggaag	ttcagcaact	tcaggAAAAC	ttggacAGTA	ctgtgACCCCA	gcttgCAGCC	540
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aatatGGGAGA	ggaAGTTAG	tgatgcGATT	caaAGCAAAG	aagaAGAAAT	tagACTAAA	660
gaagataatt	gcagtGTTCT	aaaggatCAA	cttagACAGA	tgtccatCCA	tatGGAAAGAA	720
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gagaACAANA	angCTTGTGG	ttaAAACCCCA	atCAGCTTAT	ggGAACACTT	gaaaACCATC	1320
aaaANGGAAA	cattAGNCA	aaAGGNCAG	ttggATTCCt	tggtnAAATC	ctgnCTTCTN	1380
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<210> 404

<211> 819

<212> DNA

<213> Homo Sapiens

<400> 404

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gaacatgaca	agcAGATTG	ggAGTCCAAG	gccccAGACAG	aggTCCAGCT	tcaGAGAAAG	180
gtctgtgata	ctctACAGGG	ggAAAACAAA	gaACTTTGT	cccAGCTAGA	agAGACACGC	240
cacctatacc	acAGTTCTCA	gaATGAATT	gctaAGTTGG	aatCAGACT	taAGAGTCTC	300
aaAGACCAGT	tgACTGATT	aAGTAACtCT	ttAGAAAAT	gtaAGGAACA	aaaAGGAAAC	360
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gctATTGCTG	aACTGCGTCA	gcaACATGAT	aaAGAAATT	aAGAGCTGGA	aaACCTGCTG	600
tnccaggAGG	aAGAGGAGAA	tattGGTTA	gaAGAGGAGA	acaANAAANGC	ttgtGGTTAA	660
aACCCAATCA	gCTTATGGGA	acACTGAAA	accATCAA	NGGAACATT	tgNCAAAG	720
gcncAGTTGG	attCCTTGGT	naaATCCTGN	cttCTNTTCC	aaATGGATCC	gagaACCGCN	780
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<210> 405

<211> 761

<212> DNA

<213> Homo Sapiens

<400> 405

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ttaggganAG	gctAGGcAGT	gaACACATCA	tgtATGCAAT	gAAAATAAA	ccaACTGGTA	180
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cttCTCAGGT	ctATCTATAT	ttaATTtGT	cttCTCTATA	ttCTCCCTCC	attGCCACAG	300
agggcanAGA	caATGGGGCT	gAAAACtGT	aATAACTGNC	actAACAGCA	aAGTAACtTA	360
gtNCTTCAAG	aggTCAGGAG	ttgcAGTGTG	gtgttANACC	agtCANACTC	ctggCTGAAA	420

gtcaatgcct aatatggct cccagnggcc cctgagcact gtctcagggt ccacattcca	480
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tccctgcctt ttggtaaaag gaaagactttt gggcccctt aataccttan tatcccattgt	600
gatcaagggc caaaaagccaa aggggattct tattcttata gcctaagacc ctgaaattct	660
tcccttccca attatatctg gaaattggcc agggaaanaa aaatgctgnc cttcccatgn	720
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<210> 406

<211> 758

<212> DNA

<213> Homo Sapiens

<400> 406

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attaggctca acaaaccaaa tgtgattctc agattaagca gaagcgttca gctcaggc	180
agtagaagaa agcagactcg ccagtcctg cagtcacac ctgtctcg atcacctcg	240
ttttgcagg cacttccgt gaagagttgg agagaagacc tgtaaatggg aagactgttc	300
cactgaaatt gatgttctga tgtagaggt gagagaattc caagtttga ggggagtggt	360
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gtccccattca ctgnctcta accggcttga tctgtcttc ggcacacgag gagacattt	660
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<210> 407

<211> 778

<212> DNA

<213> Homo Sapiens

<400> 407

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cgcaaaaagg cacaagcaga attagcttagc ttcaaaagtcc tgcttagatga cactcaaagt	240
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gaagataatt gcagtgtcta aaggacactt agacagatgt ctttcntatg gaagaatcaa	720
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<210> 408

<211> 752

<212> DNA

<213> Homo Sapiens

<400> 408

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aaacccaaang	ngattntnaa	attaancaaa	ancgttcagg	ctcagggcag	taaaaaaaaag	180
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<210> 409
<211> 736
<212> DNA
<213> Homo Sapiens

<400> 409						
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<210> 410
<211> 766
<212> DNA
<213> Homo Sapiens

<400> 410						
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<210> 411
<211> 812
<212> DNA

<213> Homo Sapiens

<400> 411

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<210> 412

<211> 857

<212> DNA

<213> Homo Sapiens

<400> 412

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tcagaaataa aaagcacagt gctgcttctg gagacatgcn	gacaagnctt ttttgctga	780
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<210> 413

<211> 790

<212> DNA

<213> Homo Sapiens

<400> 413

ctcaagtna ttttatttanc aaaaagngca aactatttg	ancaaaaagta aactatgagt	60
cacagcnntc agcaagacat canacnccga anagnanca	atattcacta agtaaaatnc	120
agcanatgan atgtctntca catgtatatt naattattca	tgcttttca atagtctntt	180
agtcaacttt cagngtaatt tccacaaata tatagcagnt	caaacncaaa tgcaggancn	240
caangccaaa gttnggcaac tggggcgtttaaattatgag	tntgaaagaa anccttatat	300
cacagtttca cggtcatgta anccactgng caacatgaat	gaatntttaa angngttgac	360
nctgaaatca angtncaact aangaaanta aagaanaaaaa	gggggcttta aaatatnngt	420
ngcnctacag tcgtatagta agaggcagaa aaaaatgaan	gaatntttaa taatcttaca	480
cgtgtntaca gggccaggaa cgtaatgaat ccatgttaac	ttaatttcat taaaatttnc	540

atttgtagaa gtcncncaac agaaagatcc atgcgggtga acagtgtgcc tgncttgac	600
aagttagaga agatccttct ccaaaaaggga gattcagtttctt agggntactt cagttttcc	660
catagngctt acagggcana atcttttca aaagcaattt tctggccctt aaatctacag	720
gcnctantgg gacctgtaat taaaancccc caattttaag gangattttt aaaccccaact	780
taagctttta	790

<210> 414
<211> 1063
<212> DNA
<213> Homo Sapiens

<400> 414	
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nngcnnttgcac tctglnnnnngc gacntnttgc tagtcttcag gnctcctact acaggctttg	120
taatganctn nacttgnctt gagacagcctt angggagacc acggatgntc tattannngn	180
gcangctgnn ctatngcaan ntgggnctna nnctgnanaa tcannngcng ccatgnnaga	240
ttaatagaag ctcatnntgt cataaatgggn ccatgactta taaatnaagt ggactggata	300
tcttatgaca gnagcnatnt angcttngtg ngnagttaaan gcttccacct nnggangata	360
agaggncnac ctgtntnan ctnntgcngc tgnaagancc agaganannt gcntgggag	420
attcatggcc natgatagta tatnatctt tacaccanat atgccttgct gnatcncaa	480
tctggacata cacnnttcc ccatctcaga cttcnntgca gcagctgctt nccnacnnta	540
cccatgaacg acanntgctt acgntanagc ntgaacnnta tgatgagctt cntcagccca	600
gacctcatca tttcgagaag cacatgtccc tgcgtttcaa cctatggatg aggaaaagn	660
ctngngctta aagctcttga aaatccttta cacnngaanc nttctgcata gcttnaatca	720
ctctgagntg cccacatngn gtnctgaaag gcttccggnt annatggttc cgggaccc	780
aacccttccg tttgaatnct nacntgaccg ganagggtnt gcctgggttc cttngccnc	840
gaacttaacc ntacacaattn ggntgngant tcntggtaac ggcntaatct nccccagggaa	900
ttggccgctg cttcnacggg aattaanggg aatctttccc atcccnctta nnaccagtt	960
ggngcccntt tttcaatttt cngactcccg gagctttaa aaaccggggg ctttaggtt	1020
cttggatggc nttgggggtt gcccccttta gggattaaa ggg	1063

<210> 415
<211> 824
<212> DNA
<213> Homo Sapiens

<400> 415	
gtttgattnt aacaaaannt attatgcaca aatnacnnag gntanagact ctnncatctn	60
anatnaaaat ancagttata attacacaca taatataagg accttataca atgattccaa	120
taaatatcac agggaaataca ntgcatttca aagntgnana gacnaatact tnctcattca	180
cagngntga catanganag cctattaca tancnatctg tataaagtca tgctctn	240
ancaggnat ncagngctgn gccancacaa tgntttnaga angtgaagaa ccggnc	300
cactnntggn gctggggatc tgganaagcc acctgnanaa gcttcaactt gaggcangact	360
cannaatgnc ttgngccctt taggtggcac tggctgtgga agtggtaag ctgctgtga	420
actcaattcg tggactgnag aatttaggaat ggganccagg cggttnggat gaccattgcc	480
cactcnanca natnccaaag nnctnagaan gggAACNCTC caancctgt tnatggngat	540
taancatnct tcttcttttgc ttaacccat gatttananc acancagcna gtacngactt	600
ggntttaccc ncttngtgc gaaataagga ttcttgatn actaaannnc agctggtnaa	660
aacntaactn tccctcaatt tagcnnattt ntatgaancc gggcctant ntcntgttca	720
aaaangngnt tttaagttcc ggttaatccta ccggnaatta nttgggggtt ntgaattcan	780
cncccttana anatttnggn ttaccatttta aatccaaagg ccac	824

<210> 416
<211> 838
<212> DNA

<213> Homo Sapiens

<400> 416

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aaatacacaa ttttactagc aaatgcctct actgtaatcg ctatttaccc acagatactc		180
tgctcaacca tatgtaatt catggctgt cttgtccata ttgccgttca actttcaatg		240
atgtggaaaa gatggccgca cacatgcgga tggttcacat tgatgaagag atgggaccta		300
aaacagattc tactttgagt tttgatttga cattgcagca gggtagtcac actaacatcc		360
atctcccttgt aactacatac aatctgaggg atgccccagc tgaatctgtt gcttaccatg		420
cccaaataaa tcctccagtt cctccaaagc cacagccaaa gggtcaggaa aaggcagata		480
tccctgtaaa aagttcacct caagctgcag tgccctataa aaaagatgtt gggaaaaccc		540
tttgcctctt ttgccttca atcctaaaag gaccatatac tgatgcactt gcacatca		600
tacgagagag gcaccaagtt attcagacgg tcatccagtt tgagaaaaag ctnacctaca		660
aatgnatcca ttggcttggt gngnatacca gcaacatgga ncggctnaac tatcacttct		720
gnatctagn t cactggang gccgtttggn aagganccca aatggccag gataagacaa		780
aaggcnccct ttngggttaa tcagnettcc aagtctngca cctgtgnaac gcacttac		838

<210> 417

<211> 880

<212> DNA

<213> Homo Sapiens

<400> 417

aaggcacaata cagcaattt a ttagatgct taaaatgaat acaaaggaa aataaagatc		60
acaaaattat acataactaca acagtgtgtc atatattaga tggtaataat gaatccacca		120
tgatgggttt gaactaaaga taaaactaaa tatccaaaat gcagcactca ttgggttgc		180
gcttcacac aacacactt tatacagatc taaaagggtgt caaaattagt agctgaaag		240
tcaattcttg catgtgattt tagctaaaa gatttcagaa aacagatctg aaataccagt		300
ttttgtttt gacagctgta atgtcaagga tattcagaac aagaaaaatc ctataataca		360
agagagtcca gatatatac ttacgtggct ggccctgtt gcaagattgt acaaggttat		420
gtgcaaaaac taagtctgtc caaaaagtcc atactagcgc agtttgagc ttttgctagg		480
taaactagat agagcgttta ttacacagca agggcaacac taaaaaaaga aatctatgat		540
gggcacacag taacaggatc atgagcatca ctgaatagg tctaaaagac tgtcaaata		600
acatttcaac tattcagaat gaatacatga aaaaaaaatcg cttttccaa aggtctacta		660
tancattan actgggagct tgnatgtgg gccctacact accatggga attangtta		720
acactntta aaaacatttgc gccaatcatt tcncagang gaaagaaatg ttgaaaaggc		780
cgataaaaata aacccttggg ttttcctcg gggattcatg gagtcacccg ccttaatggg		840
ttttcacatt taagttaccc gggcttggca aaaaaaggtt		880

<210> 418

<211> 763

<212> DNA

<213> Homo Sapiens

<400> 418

agaagatggc ggaagcggaa tttaaggacc atagtagc tatggatact gaaccaaacc		60
cgggaacatc ttctgtgtca acaacaacca gcagtagccac caccaccacc atcaccatc		120
cctccctctcg aatgcagcag ccacagatct ctgtctacag tgggtcagac cgacatgctg		180
tacaggtaat tcaacaggca ttgcacggc ccccgagctc agctgctcag taccttca		240
aaatgtatgc agcccaacaa cagcaattga tgctgcatac tgca gctt cagcagcagc		300
atttaaagcag ctcccagctt cagagccttgc ctgctgttca ggcaagtttgc tccagtggaa		360
gaccatctac atctcccaca ggaagtgtca cacagcggc aagtatgtcc caaacgtctg		420
tagaaattct tatggactgg aatcttctc aaggcttatt ttgttctgg gatgcagtgg		480
tgcataagaag atagggcatt gactca gacatggcc gcccagcatg cattgcaaca		540

ataatgtca agttattaaa gacatgagtg aattcgtgac agattgtcag aaaagaaaca	600
agagtttct acaaacaaaaa actggcttat ggaacatata cttctgctt agttgaatgt	660
gttggggctg agtgtaaagaa aatgcaagct gcaaattctgg cttacatgtg gaaccaaagc	720
tggaaatgng tgcttaan gcaacttgc aaattggatt tcc	763

<210> 419
<211> 753
<212> DNA
<213> Homo Sapiens

<400> 419	
ggactattta cttaaatgt aattatcaat acagtcgggt taaatctacc attttgttgt	60
tggttttcta tttgtttcat ttgttcttc ttcccttttt tcacctcttc aggattattt	120
tggattcaact actttttta nangntcggtt ttaccactac tattggccta ttacactgtat	180
ctcttttttta taatggcatt tctctaggat ttacaatatg catctttgc ttatagtatc	240
ttgaaatagt agngtaaacac ttcacaaata gагтaaaac cttataatct tccattttc	300
ccttccttct tttgtgttat tgatgacnca tatttactcc tacagatatt ataaacaaat	360
tгататакнс acattatcat ttttgcattt catactcaat tatcttttaa ataaaataaaa	420
aattgaggag aaaatccgtt atattatcta cacatttact gtttccagca cttttcattt	480
ctttngntag attcaaattt ctgnatctt cccttgcсcc aaagaacttc ttttcatctt	540
tcttatagtt caggtctgtt ggcaaccaat tagctcagcc tttgtttgc тааааагтт	600
catatattat ctgattttc aaatggnatt taagctctat atagaattc ttaggtgact	660
ttaattcctt catattggg aagangtcat aaaggcttg caaaggacta gaaatctgct	720
tacattttt nattggtaa tctttcttac cca	753

<210> 420
<211> 799
<212> DNA
<213> Homo Sapiens

<400> 420	
gaaaaacgct ttgataccaa gaattaaaaa tgcttgccta caaacatctt cccttgcgggt	60
tcgtgttaat tcattagtgt gcttagaaaa gattttggaa tacttggata agtggtttgt	120
acttgcgtat atccatccct tcttacaaca aattccatcc aaggaacctg cggtcctcat	180
gggaattttta ggtatttaca aatgtacttt tactcataag aagttggaa tcaccaaaga	240
gcagctggcc ggaaaagtgt tgcctcatct tattcccctg agtattgaaa acaatcttaa	300
tcttaatccat ttcatttccgt cataaaagaa atgcttaata gattggagtc	360
tgaacataag actaaactgg agcaacttca tataatgcaa gaacagcaga aatctttgga	420
tataggaat caaatgaatg tttctgagga gatgaaagtt acaaataattt ggaatcagca	480
aattgacaaa gttttaaca acattggagc agaccttctg actggcagtg agtccgaaaa	540
taaagagagac gggttacaga ataaacataa aagagcatca cttacacttg aagaaaaaca	600
aaaatttagca aaagaacaaag agcaggcaca gaagctgaaa agccagcagc ctcttaaacc	660
ccaagtgcac acacctgttg ctactgttaa acagactaag gacttgacag acacactgat	720
ggataatatg tcatccttga ccagccnttc tggtagtacc cctaaatctt ctgcttcaag	780
tctttcactt ctggtcctt	799

<210> 421
<211> 770
<212> DNA
<213> Homo Sapiens

<400> 421	
gttcaatatg gggacattc tggctcatga atctgaattt cttggactag tgaaagagta	60
tttagatttt gctgaatttg aagacacctt gaaaacattt tcaaaaagaat gaaaataaaa	120
aggaaaaacca ttgtgtaaaaa cagtaggcgg atctttcaga gactccaaat cattgacaat	180

tcagaaggat cttgtcgctg catttgacaa cgagaccag aagggtttct tcgatctgtg	240
ggaggagcac atttcaagtt ccattccgaga tggggactcc tttgccaga agctggaatt	300
ctatctccac atccattttg ccatctatct ttgaagtac tctgtgggaa gaccggacaa	360
agaggagctg gataaaaaga ttcttactt caaacctac ctggagacca aaggggcagc	420
cttgagccag accacaggt ttcttccctt ctatgccctt cttttgttc ccaaccctat	480
gtgcacccc tcattaaag aactcttca ggattcctgg actccagagt taaagttgaa	540
tttggaaaag ttcttagctt taatatctaa agccagcaac acgccaaagc ttttaacaat	600
atataaggag aatgggacan agtaacaaag aaatcttgc gcagcttac cagcagctgg	660
ntgaagctg aaccgttagt caatgacata cctcaaacgg naccataaga tccaggcccg	720
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<210> 422
<211> 733
<212> DNA
<213> Homo Sapiens

<400> 422	
caaaangaan gctttatTTT gaattttaaa aatacataca tcttacactg taatcaaaac	60
aaagcttaag aaagtcaatt cccgcttcct ttagccctga cttacactgg gtacccgttt	120
ctgtggccgc cgggggtgac ggnccTTTgc aggggctcat ccccgctcca ctgcacatta	180
gccagccccct tccgcTTTgt cttcccognng ttggtcatga tccccaggta ctccgnggtc	240
anaagcttct ctcctgagag ttctccgagc tggggcttggaa tcagttcgtc tttgtccana	300
tcggcttcca ttagtgcattg gnccTCTTca tcatcttcat cttcatcatc atcagattca	360
agaacaccat ctggtagctc ttggaaattt agctgcttga ttagtgcattc tatctggcg	420
atcatttcag cattgccttc tttgatgaag cagcgttagga tgcattccat tcccattgt	480
cttgcttcct cacgaatgga tggancagaa aggtgcgt acagagctcc attcacatac	540
ggctgtatct catggTTTtc atggccaaga agatccgaaa ggactttgag caccgaggcc	600
tgccaccttgc acacacatgg tcttccctgn gctgcggagg gcagaggttc atggagcaaa	660
agccaccgag tactccaacg gggnagccag acagggcagn cagggcctt tcanaacatc	720
aacccagccc gaa	733

<210> 423
<211> 862
<212> DNA
<213> Homo Sapiens

<400> 423	
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actccccctc gccccatccgt gtgcacaccg tgggtcgacag gcctcagcag cccatgaccc	120
atcgagaaac tgcacctgtt tcccagcctg aaaacaaacc agaaagtaag ccaggcccag	180
tggaccaga actccctcct ggacacatcc caattcaagt gatccgcaaa gaggtggatt	240
ctaaacctgt ttcccagaag cccccacctc cctctgagaa ggttagaggtg aaagttcccc	300
ctgctccagt tccTTGTCCT cctcccagcc ctggcccttc tgctgtcccc tttccccca	360
agagtgtggc tacagaagag agggcagccc ccagcactgc ccctgcagaa gctacacctc	420
caaaccagg agaagccgag gctcccccaa aacatccagg agtgcgtaaa gtggagccca	480
tcctggagaa ggtgcagggg ctggagcagg ctgtagacaa ctggaaaggc aagaagactg	540
acaaaaagta cctgtatgtc gaagagtatt tgaccaaaga gctgctggcc ctggattcag	600
tggaccccgaa gggacgaagc cgatgtgcgt caggccagga gagacgggtgt caggaaggtt	660
cagaccatct tggaaaaact tgaacagaaa gccattgtatg tccangtcaa gtccaggct	720
atgaacttca agccaagcaa ccnttgcac agatcaagcc cctggaggca atcatggaaa	780
agggtgcctg ggcagcaaga caagggcaag aaaaatgcctt ggaaatggcn gaagatcccc	840
acacngggaaa ccagcaggcc cg	862

<210> 424
<211> 859

<212> DNA
 <213> Homo Sapiens

<400> 424

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cagatattcc	tatggctcct	ggcacatttt	actctctcta	aagtcaaggta	tttaattat	120
gagatgaaga	aatcatctc	attaaaatgg	caacatttct	gataaaatgtt	tcatatttat	180
gtgatgggta	attgactccc	catctacccc	tccagtcag	agctacaaaa	gacagtgcac	240
aaccacagct	aacaggtgg	gggggtgccc	aagttagacag	ggctgcagaa	caagcaacgg	300
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ataccaagca	gctaataaaa	accaactgac	ttaaagtctc	tgaaatgcat	gcaacttaaa	480
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gctgggttac	caggggtgtc	tggcatgctg	ctgggggttt	aagtcgctgc	tgctgnggct	600
tctggctgct	gggtttctgt	gtggggatct	ttctgcattt	ccagcatttt	tcttggcctt	660
ggctgctgcc	acggnaccca	tcttcatgaa	tgcctgcaaa	tggctggacc	tgnttcaaag	720
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tggtaaggt	ttttccaaga	agggcctgga	accttctgg	acancggntt	tttctgggcc	840
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<210> 425

<211> 837

<212> DNA

<213> Homo Sapiens

<400> 425

cagaatggag	gtggagtc	taaacaat	gcttgaggag	ctaagacttg	aacggaagaa	60
actaatttggag	gattatgaag	gcaagttgaa	taaagcttag	tcctttatg	aacgtgagct	120
tgtacttttgc	aaaaggtcac	agcttttac	agcagaaagc	ctacaggcca	gaaaagaaaa	180
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ccaaaagtt	cagacggcac	ttgccccat	agagaacaat	gttcaggttc	ttcaaaaaca	360
gcttgcgtat	gccaaggagg	gagaaatggc	cctattaagc	aagcacaaag	aagtggaaag	420
tgagctagca	gctgccagag	aacgtttaca	acagcaagct	tcagatcttgc	tcctcaaagc	480
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agaatcagaa	aaatcgagag	tcaatgagag	attatctcaa	cttgaagagg	aaagagcttt	600
tttgcgaagc	caaaaacccaa	agtctggatg	aagagcagaa	gcncacagatt	ctaagaactg	660
ggagaagaaa	gtaaaatgaac	caagagactc	agcaggaata	ttatgaaagg	gaactaaaa	720
anctgcaagt	agaatggaag	aagagggct	taattaacga	nggcattct	aagacttttgc	780
gaagaatttag	cttggAACNC	cttttggcaa	ttgaacttgt	cncaggtaat	gccattt	837

<210> 426

<211> 724

<212> DNA

<213> Homo Sapiens

<400> 426

gattctaaca	aaatttatta	tgcagtaatt	acaaaggta	aagactctc	catctcaa	60
aaaaataaaca	gttataatta	cacacataat	atagtacctt	atagaatgt	tccaataaa	120
atcacaggaa	atacagtgc	tttcaagtt	ggagagacaa	atacttctc	attcacagtg	180
tttgacatag	gaaagcctat	ttacataaca	atctgtataa	agtcatgctc	tttagtaacag	240
tctatacaga	gctgtgccaa	cacaatttctt	tcagaatgtg	aagtaccgg	caaaccactc	300
ctggcgctgg	ggatctggag	aagccactgg	agaagcttca	ctctgagcag	gactaaaa	360
tgtcttgggc	cctttaggtg	gcactggctg	tggaaagtgt	ttgctgctgt	tgaactcaat	420
atcgtggact	ggagaattag	aatgggatc	caggcggta	ggatgtccat	tgcccactcc	480

accagattcc agagcactta nattgggaac actcacaaac ctgtttgttgcgtgatttac	540
attcttccttc ttttgcttag ccaatggatt aataacacca acagtaggac ttgagttaaa	600
cactttggtg aaagtttagtt tctcgatttactaattcoa gctgataaaaa cttattatcc	660
tcaatttagtt tctttatgan ctgggcctct ttctgttaagc atggctttta attctggaat	720
catc	724
<210> 427	
<211> 981	
<212> DNA	
<213> Homo Sapiens	
<400> 427	
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tagatgatga tagtncaat gaanctgnga ncatanatta angaaacana naacantncn	180
aaaggtccac aaatctggtc ctatgaaaag agtaaaattt ccaagactng gtgaaaganc	240
ccannnaaaan ncanagagag anagagagag agagaganac anagagagag aganaaaagg	300
aaggcacacn taancnatat cagcaataaa anggnacttntacana ttctgcaanc	360
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gatgccgata tgttgaaaaa cttaaatgaa acggaaaaat tccttgaaga accacaantt	480
aaatttgaca caggtgaaaaa atntgaatgc agttngncct tcagtatctg tggggaaatc	540
ggtnccagaa ccactcccccc antaccnaaa ttataatgt ctcaagttcc tgatataaaaa	600
tggcaaagta ttgcata nccatccct acccttttac atactttaaa taacctntga	660
gttncttnat tatacctaatac ataatgtaca ttctgtgca aatcgntnn taatatttgg	720
ttttnaaaaat tatnttattt ttggaatagg nngtntattt tcctgggct tttttttcc	780
ccaaatattt tntaattccc caatnggtt ggaatcttgg gaaccccatg gnggggancc	840
catangattt tgggaanggn ccaacttggg gccttngtaa cttttaaag aaatngggaa	900
ttcttgnntn aanaatttcc ncnccaaag aaaacccctt tggccccana agttntttaa	960
aatggggaaa tttncccaaa c	981
<210> 428	
<211> 655	
<212> DNA	
<213> Homo Sapiens	
<400> 428	
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ttttattcat ccaagaaata ttcatttagag aaattggcat gggattttttt ttcattgtat	180
atgtccttgt caggtatcaa ggctttca gcctgataaa gcatattaag aaatgcttcc	240
tctttccta ttctctggaa aagattgtt aatattgtt ctactacttc ctgtatgtt	300
tggtaaatt cacaattgaa gacatctggg cctagcgtgt tctttttagg aagaatatta	360
agaaagaatt ccatttctt aaaagttacg agcacagtttgccttccaga tctatggatc	420
ccacatgagt tccagattca accaattgtt tattaaaaat atttggaaa aaaagccaca	480
agaaataata caactataca aaataatata attttaaaa tacaatataa caacgattta	540
cacagaatgt nccattatgt taggnattat aagtaactca gaggttattt aaagnatgtg	600
agaggnnatg gataggctat atgccaataa ctttgcant cttatantca gggaa	655
<210> 429	
<211> 788	
<212> DNA	
<213> Homo Sapiens	
<400> 429	
gagcagcaga gatTTTgct gtgagaatta attaccagta acagttcaat atgggggaca	60

ttctggctca tgaatctgaa ttacttggac tagtgaaaga gtatttagat tttgctgaat	120
ttgaagacac ctggaaaaca tttcaaaag aatgc当地 aaaaaggaaaa ccactgtgtaa	180
aaacagttagg cggatcttc agagactcca aatcattgac aattcagaag gatcttgtcg	240
ctgcatttga caacggagac cagaagggtgt tcttcgatct gtgggaggag cacatttcaa	300
gttccatccg agatggggac tccttgcggc agaagctgga attctatctc cacatccatt	360
ttgccatcta tctttgaag tactctgtgg ggagaccgga caaagaggag ctggatgaaa	420
agatttccta cttaaaaacc tacctggaga ccaaaggggc agccttgagc cagaccacag	480
agtttctcc ttcttatgcc ctcccttttgc ttcccaaccc tatgtgtcac ccctcatttta	540
aagaacttcc ccaggattcc tggactccag agttaaagtt gaagttggaa aagtttctag	600
ctttaatatac taaagccagc aacacgccna agcttttaac aatatataag gagaatggac	660
aaagtaccaa gaaatcttgc agcagcttca ccacagctgg ttgaagctga acgttaggtca	720
gngccttcct taaacgggcc aattaagaat ccaggccgac taccacaatc ttantggggg	780
tcccagca	788

<210> 430

<211> 655

<212> DNA

<213> Homo Sapiens

<400> 430

caaaatgaat gctttatTTT gaattttaaa aatncatacn nttaacnctg naatcaaaac	60
aaagcttaan aaagtcaatt cccgnntcct ttanccctga cttacnctgg gtncccgTTT	120
ntggggccnc cgggggngac gggccttgc aggggctcat ccccgnntca ctggacattt	180
nccagccccct tccgccttgg ctteccccng ttggatcatga nccccaggtt ctccgnggTC	240
aaaagctnt ntctgttggaaag ttctccganc tggggcttggaa tcanttcgtc ttgnccaaa	300
ncgggnntcca tgatgnatgc ggcctnttca tcattttcat tttcatatc atcanattca	360
anaacncat ntgnanctt ttggaaattt aactgttga tgangaattt tatntggngg	420
ancatttcag catgccttgc ttggaaagaaac canctgttga nggttccat tcccatttgg	480
nttgnnttcc cacgaatggaa tggAACANAA aggatgtnt acananctcc attcacatac	540
ggntgnatnt catggnttcc atggccaana anaatccaa aggctttag cccaggncgtt	600
gccccttggca caaatgttnt tcctggcttc cgaaggccaa ggttcatgtt ccaaa	655

<210> 431

<211> 844

<212> DNA

<213> Homo Sapiens

<400> 431

ggaagaagga agaggtaact ataactaccc aatattgcag ccatggagtc catgttaat	60
aaattgaaga gtactgttac aaaagtaaca gctgatgtca ctatgtctgt aatggaaaat	120
cctgtcaacta gagaatttga tggatgttgc cacattgcca gtgggtggcaa tggcttagct	180
tggaaagattt ttaatggcac aaaaaagtca acaaaggcagg aagtggcagt tttgtcttt	240
gataaaaaac tgattgacaa gatatcaaaaa tttgaaaagg atcaatcat tgattctcta	300
aaacgaggag tccaaacagtt aactcggctt cgacaccctc gacttcttac tgtccagcat	360
cctttagaag aatccaggga ttgcttggca tttgttacag aaccagttt tgccagttt	420
gccaatgttc ttggtaactg ggaaaatcta cttccctta tatctccaga cattaaggat	480
tataaactt atgatgtaga aaccaaataat gtttgcctt aggttctgtt aggttgcata	540
ttcttgctata gcagtgtgaa aatgggtgca tggaaatatac actcctgaaa atataatttt	600
gaataaaaagt ggagccttggaa aaataatggg tttgttacat tgntatcat caaccaatcc	660
ttctgttacaa gggcttggata ttccttggtaa agaattggac ccaaaatttac cttcatttng	720
tcttncaaattt cctgttacatt tggcttgcata atccttacttt ctgngaaactt gtgaaaccag	780
ccagtggttata tggatttgc ttaggttactg gtatgttgc cgggattttt aataaaaagg	840
aaaa	844

<210> 432

<211> 807

<212> DNA

<213> Homo Sapiens

<400> 432

atcaaagcta aaatttattt ggtgcatact cctcttgata tcaggtatgt tcgcatatac	60
ctttttctt catgtgtaaa aacaaccatg tgaggtattt tacaggtcaa aagaaaacaa	120
aaactacttc cttattcagt gtaaaggagg cttataagca ttccaaaata aaaacaaaca	180
aaaaccagac aagtacatag tctattcca tttcctttt tacatcctct ctatatatca	240
cacathtagc aataggagaa tagagaacta attcaaattgc aagggaatct tttttaga	300
ttctgttgc agatgcttt taacctaaac attttctact ctaaacataa cgacttaat	360
tgtcttcagt acgtgaaata attttaaggt gatctgtac tttgaaaatt tcattcactt	420
aagaacactt aagctgaaaa atagcactat tttcagagg caattctca acagaaaaag	480
gcaatggtaa cagttcaatt gatggaaatg gttgaaataa aatacctgaa gtagaaaaaa	540
ggtgttaggaa caattttgtt aaaaacatagc accattacct caacgaatga acaaatttta	600
catactggat tttttcaaa tgacttattt tcatatttag tagtcaagg tctataagct	660
ggttatattaa gcttcttcc tggtaagag ntcaacactt acatcatggt atttachaa	720
ataaaaacc aatttcttaa ataaaccgng gtcctaaaa tggtaccaag gaaaaattct	780
tcaataccctt attaattcc ataagga	807

<210> 433

<211> 866

<212> DNA

<213> Homo Sapiens

<400> 433

cttcagccca gatgcagaat gggggccccct ccacacccccc tgcacacccc cctgcagatg	60
gctcacccccc attgcttccc cctggggAAC ctccctgtt agggacctt ccccgggacc	120
acaccccttt ggcaactagtt cagaatggtg atgtgtcgcc cccctctgcc atactcagaa	180
caccagaaag cacaaccccg ggtcctgttt gtcagccacc agttagttag agccgctccc	240
tgttttcttc tgtccctgtcc aagccaccaa tgtctctgga gcctcaaaat gggacgtatg	300
caggaccacgc gccagccattc cagccatttt tcttcaactgg agcatttcca ttaatatgc	360
aagagctgtt actcaaggtg agaattcaga acccatctt tcgagaaaaat gatttcattt	420
aaatttgaact ggaccgacag gagctcacct accaagagtt gctcagatgt ttttgctgt	480
agctgggtgt taatccagat cangtggaga ngatcagaaa gttacccaaat actctgtttaa	540
ggaaggacaa ggatgttgct cgactccaag atttccagga gctggaactg gttctgtatga	600
taagtggaaa taattttctg ttcanaaatg ctgcacccac actgactgaa aggcccttgct	660
ataacaggag agcttcaaaa actgacttac taatgcacag ggacttttat cactggagta	720
ttatgacagt gngcatcacc ttntggccc aaggaccaag ccattggct aaaaggcctc	780
aaaatgcccc gggangggcct ctggggccca tggcatttagt atatactaac catcattctg	840
gccaggttaag gaagccccctg gacccc	866

<210> 434

<211> 764

<212> DNA

<213> Homo Sapiens

<400> 434

caaaataacc tttatTTTt atacaaaaat aaagatgcta actccttttag ctcagttcc	60
cacaataacc tttaaaatag caacagattc agtctcaaaa attgcttttcc attttagtg	120
gaaaatgaaa gtggagaaca tggaaacagca atatttgncc tcttctcata ggatgcagtt	180
acacacacat atgactggaa tcacttcaga gtaaaaaaaa agtgggctgg gtgcagttgc	240
tcacacccctgt aatcccagca ctttggggagg ccaaggacag gagcatcaat taaggccaga	300
agtttgagac cagcctgggc cacatagtga gaccctgtct ctatggggcg ggtgggggtg	360
ggggccattt taaaaaagca gttgttcttt tanaaggcat cagagagccc tntagtgacc	420

acgaagggga gttaatgcag agatgactcg agacagagaa gcagtcatga gtgtttacaa	480
aggaaaaagt gaggggaggga aagcttttt gttAACAGC atatttacaa ttagttaact	540
gnattctaa atactttaa CCTGAGTAAC atttataaat atgttatagg aaacctcaca	600
gtcacaagtc acactagaat ccatctgtcc agtatctggg ctcccccac accagaatcc	660
atctgtccag tatctggct ttcccagtc ttcctttct cataagttcc caanggcagc	720
anaagtgtga agcatgcaca ccaaggaaaa acgcattcca gcc	764

<210> 435
<211> 834
<212> DNA
<213> Homo Sapiens

<400> 435	
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agataaaagaa cagtgttcta cccatggtt acagagact agaagctcct tccattcaga	120
tccaggagct ctgtctaaac atcattccaa ctttgcaaa tctttagac taccatcca	180
tgaaaaacgc tttgatacca agaattaaaa atgcttgct acaaacatct tcccttgcgg	240
ttcgtgtaaa ttcatctgt tgcttagaa agatTTGGA atactggat aagtgggg	300
tacttgatga tattcttaccc ttcttacaac aaattccatc caaggaacct gcggtcctca	360
tgggaatttt aggtatttac aaatgtactt ttactcataa gaagttggga atcaccAAAG	420
agcagctggc cgaaaaagtg ttgcctcatttattccct gagtattgaa aacaatctt	480
atcttaatca gttcaattct ttcatattccg tcataaaaaga aatgcttaat agattggagt	540
ctgaacataa gactaaactg gagcaacttc atataatgca agaacagcag aaatcttgg	600
atataggaaa tcaaATGAAT gtttctgagg agatgaaagt tcaaATATTG ggaatcagca	660
aattggcaaa gttttaaca acattggagc agacctntg actggcagtg agtccgaaaa	720
taaagangac gggttacaga ataaccttaa aagagcatcc ttaccactt gaggaaaaac	780
caaaaatttgc caaaagaacc aggacggcn ccgaagctgg aaaagccgca ggct	834

<210> 436
<211> 812
<212> DNA
<213> Homo Sapiens

<400> 436	
acagaagtaa agtttattac atttggaaaca atacagcaga aacctaaaaa gtttactcat	60
aaatatagtt taatttttac aaatcttctt ttggaaaatgc aattcatata tgctgcacc	120
tcagaagttt gaatttgaaa tgaaatatga aggttagt cagggagtc acatcagagt	180
gccttgc当地 atatccaaac aaatcagcac atacctttc cttgatacag gaggaaaaaa	240
gtgatttctaa atatatccaa gtgaatgcag aaaaatacat tactatttga ggcagaccat	300
gctaaaaat aatttacaat gattatTTG cacttaagat ggttaataac gcatttaaac	360
caatgaaatg aaggtaagt tgaattttgt agtatttgc cagtcctgt actaaacaat	420
agttcatctg aaaaagggg aaaaagcaaa taacctgata cttcttttta tgcttatcat	480
tttctcaactg tcatcttaaa tgcaaaacaaa tcaatacagc atcaagattt tttacatatt	540
aaaatgaaga ctaatgactc atagactng taccatatac tacttaatag atgagcttgc	600
aatgaccatc acctcaattt tttaataac accaagatcc acaagccaaa ataaacattt	660
gattaaaaag ttatggattt caagataact cagtttccctt ttcttttgc agattgggna	720
anggctgggt cttaaaaaaa ccctggaaaa gggagttggg taaagaggaa aaaaaatcct	780
tcaangcttt taaaaaaaaact tcnactgggt ta	812

<210> 437
<211> 842
<212> DNA
<213> Homo Sapiens

<400> 437

gtggaagagg	cgtacattt	tgcaaagtgc	agagcaggca	tggattgcca	attctggAAC	60
agagcaaaGC	cccaacttgc	cctccactgg	tgtatgtcaca	cccacccatG	aagagCCTGc	120
ctcttagggTT	gttgaatgtt	gggtcacgaa	gatctcaacc	tggccaaAGA	agagaACCCA	180
gaaagatcat	cacagttct	gtaaaAGAAG	atgtacacct	aaaaaAGGCA	aaaatgcct	240
ggaAGCCAAG	ccaaaaACGA	gacagCCAAG	ccgatgatCC	cgaaaaACATT	aaaACCCAGG	300
agcttttag	aaaAGTTCGA	agtatcttaa	ataaatttGAC	accacAGATG	ttcaatcaAC	360
tgtgaAGCA	agtgtcAGGA	cttactgttG	acacAGAGGA	gcggctGAAA	ggagttATTG	420
acctggTCTT	tgagaAGGCT	attgatGAAC	ccagttCTC	tgtggcttaC	gcaaACATGT	480
gtcgatgtCT	agtaACGCTG	aaagtACCCCA	tggcagacAA	gcctggtaAC	acagtGAATT	540
tccggaaAGCT	gctactGAAC	cgttGCCAGA	aggagTTGA	aaaAGATAAA	gcagatGATG	600
atgtcttGTA	gaagaAGCAG	aaagaACTTG	aggctGCCAG	tgctCCAGAG	gagaggACAA	660
ggcttcATGA	tgaactGGAA	gaagCCAAGG	acaaaAGCCC	ggcggAGATC	cattggCACAC	720
atcaagTTA	ttggagaACT	ctttAAACT	caaaatGCTT	gacttGAAGC	catcattGCA	780
tgactgtGTG	gtgaagCTGC	ttaagaACCN	ttgatGAAGA	atcccTGGAA	tggcctgtGT	840
CG						842

<210> 438

<211> 678

<212> DNA

<213> Homo Sapiens

<400> 438

aaactngcan	tgtntgtntt	tatTTTGTNC	tttatatttt	caaAGNGAAA	agaaatanna	60
ctgagncaat	ntctttttgt	ntttttaaan	atttgncta	tgtatTTACA	ngcTTAAAG	120
nngctctaaa	gatntcaaga	gnattaanag	nactttntc	agggnagcac	tnttttttt	180
ttaaacantt	nttggngttc	tgtggnccac	annatttcct	tntgtntCAA	ngtnatgtat	240
gtnttgatna	cnatngngat	nttttaaann	ttntgaanca	agctgagagg	cnngcanaaa	300
gatntgangc	cnnaaaaaaaa	aaaatcttn	ttaccttGtn	cacccaaac	ttttcaaAT	360
ctggncataa	tgctntacct	taaaacanac	atgagggca	tcttgaagg	gagggaaANT	420
tatTTCTCTG	cntttctatn	atacangtng	tttacanaaa	ctgngaatta	naaaattaca	480
ctggnatTTG	cngaccttaa	aataaattaa	aagtncTcaa	ctntttttt	tttgntaaa	540
cntttttta	agnatgannC	cntggtaaa	aagaaaAGNT	ttaaaccgaa	aatatTTCT	600
ataaataata	cctggatttt	gnntttaggg	ccccgcCCT	aaggnttgnA	ggttactttt	660
ntccnangac	ctttttcc					678

<210> 439

<211> 826

<212> DNA

<213> Homo Sapiens

<400> 439

gaccctttac	caacaaatga	aaatgtatgt	gatatatGCA	agaaACCTG	tagtGTagCA	60
cctaattata	ttccactggT	ttcttagtact	aacctaatta	atgaaataAA	tggagttAGC	120
gaaaaattat	cagccacgga	gagcattgtg	gaaatAGTAA	aacAGGAgt	attGCCATTG	180
actcttGAAT	tggagattct	cgaaaatccc	ccagaAGAAA	tgaaactGGA	gtgtatCCCA	240
gctcccata	ccccttccac	agttccttcc	tttcctccaa	ctcctccaa	tcctccAGCT	300
tctcctcCTC	acactccagt	cattttcc	gtgtctGCCA	ctactgttag	ttctccAGGT	360
gctGCCatCA	cagtccAGAG	agtccTAGAG	gaggacGAGA	gcataAGAAC	ttgccttagt	420
gaagatGCAA	aagagattca	gaacaaaATA	gaggtAGAAAG	cagatGGGCA	aacAGAAAG	480
atTTTGGATT	ctcaaaactt	aaattcaAGA	aggagCCCTG	tcccAGCTA	aatAGCTATA	540
actgtaccaa	agacatggaa	gaaACCAAAA	gatcgGACCC	gaaccACTGA	agagatGTTA	600
gaggcagaat	tggagcttaa	agctGAAGAG	gagctttCCA	ttggcaAAAGT	acttGAATCT	660
gaccaggata	aaatgagCCA	ggggTTcat	cctgaaAGAG	accCCTNTGG	cctaaaaAAA	720
gtgaaaAGCT	gtggaaAGAAA	atggagaAGA	actgagCCAG	accgtaatGG	ggcctgAAAG	780
ggttctgang	gtgaagGAAT	agatgttAA	ttcangcttC	cccAGA		826

<210> 440
<211> 689
<212> DNA
<213> Homo Sapiens

<400> 440
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ccacagcatt tccttctgtt tcaatgttat gtatgtttt attactattt tgattttta 180
aattttctga agcaagctga gaggcaggca gaaagattt atgcaaaaaaa aaaaaaaaaatc 240
tttcttacct tggcaccccc aaactttctc aaatctggac taaatgttat accttaaaac 300
aaacatgagg tgcacatgttga aggggaggga aatttatttc tctgttttc tattatacaa 360
gttgtttaca gaaactgcaa attaaaaat tacactggca tttgcagtcc ttaaaataaa 420
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aaaagaaaaag attaaaacag aaaatatttt ctataaataa tacatgtatt ttggtttttag 540
tgctcccgcc ctaaggttt aagtttactt ttatccagta ccttttctt ccatgatcac 600
cttttttctt cttccccctn ttccactcg ggacacgtgg ggggtttctg cnanaattgg 660
ccttgctgca ctgngaatgg gcnaaaaacc 689

<210> 441
<211> 883
<212> DNA
<213> Homo Sapiens

<400> 441
ctttttatcc tggaccagga cctggggact tcccaatgc ttatggaaacg cctttttacc 60
caagtccagcc ggtgtatcag tcagcaccta tcatagtgcc tacgcagcaa cagccgcctc 120
cagccaagag agagaaaaaaa actataagaa ttccgggatcc aaaccaggaa ggtaaaagaca 180
taacagagga gattatgtct ggaggtggca gcagaaatcc tactcccaccc ataggaagac 240
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tggtttatgg gactgtggag agcgctcattc ttgctgcccag caccctgtc actgcagcta 360
gcgaccagaa gcaagctcaa atagctataa ctgtaccaaa gacatggaaag aaaccaaaag 420
atcggacccg aaccactgaa gagatgttag aggccagaatt ggagcttaaa gctgaagagg 480
agctttccat tgacaaaagta cttgaatctg aacaagataa aatgagccag gggtttccatc 540
ctgaaaagaga cccctctgac ctaaaaaaag tggaaagctgt ggaagaaaaat ggagaagaag 600
ctgagccagt acgtaatggt gcttggaggt gtttcttgag ggtgaaggaa tagatgctaa 660
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gaaggctact ggtacttgaa ggtaagaaca gtatgaccag ggagtttctg gtggacttcc 780
cagttcatgc ctggctgnat tccaaaanc naaggccctg gtttcttattt anggatgngg 840
ttnttgacag gatcaaccaa ncccaaattgg ccaatggggaa act 883

<210> 442
<211> 777
<212> DNA
<213> Homo Sapiens

<400> 442
gctaaacatt ttttaagta tgagtccctt tttaaaaaga aaagattaaa acagaaaaata 60
ttttctataa ataatacatg tattttggtt ttagtgcctt cggccctaagg tttgaagttt 120
acttttatcc agtacctttt tcctccatga tcacctttt ttctctttcc cctctccac 180
tcgtgcacac gtgggggttt ctgcgagaat tggcccttgc gcactgtgtat tggcgaagac 240
gtgaaaactt tttaaaaaaaat acttaaattt tttcttttgc ttcattttgc gtatggaaag 300
tttttagttat cctcagactc ctcttctgtt tcccgccagcc acgtgaagaa tgccgtgaca 360
gatttcagag ccacggccctt cccattctgc tctgcagggtt cttgtgtct cttccatgg 420
tagaaggcat cctcggagat cacctccctg tcataatgc aatcaaaaaa catccgcagc 480

aaattggcag gttgatcaag ttttactatac gatgcttgta gtgcataaaag tgcttgcagt	540
tccttctctg natctgagtc taggtacttg agtaagatcg gcactctctg cttgaaacag	600
cagtgccac ttcttgaang tagaagaagt cggttattaa tagctggttt acaaacagca	660
gtcatttaaa gctctaagga atggtaggtg aactcntctg ggatttcggc taagaataag	720
cccttancc aggccaaagá acctggtcan tcaattcgct tttggccctc caataaa	777

<210> 443
<211> 875
<212> DNA
<213> Homo Sapiens

<400> 443	
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taaagcagat gatgatgtct ttgagaagaa gcagaaaagaa ctggaggctg ccagtgcctc	120
agaggagagg acaaggcttc atgatgaact ggaagaagcc aaggacaaag cccggcggag	180
atccattggc aacatcaagt ttattggaga actctttaaa ctc当地atgc tgactgaagc	240
catcatgcat gactgtgtgg tgaagctgct aaagaaccat gatgaagaat ccctggagtg	300
cctgtgtcgc ctgctcacca ccattggcaa agacttggac tttgaaaaag caaagccacg	360
tatggaccag tacttaatc agatggagaa aattgtgaaa gaaagaaaaa cctcatctag	420
gattcgggttc atgcttcaag atgttataga cctaaggctg tgcaatttggg tatctcgaaag	480
agcagatcaa gggctaaaaa ctatcgaaaca gattcacaaa gaggctaaaa tagaagaaca	540
agaagagcaa aggaaggtcc agcaactcat gaccaaagag aagagaagac caggtgtcca	600
gagagtggac gaaggtgggt ggaacactgt acaaggggcc caagaacagt cgggtactgg	660
accctctaaaa antcctaaaa atcactaagc ctacaattga tgaaaaant cactggacct	720
aaagccagct aggagctgg ggaaaaggca gcagtgggtt accaangcaa gtgaaaactga	780
gccntacggc aagtgttnc agttaaacag atctntgncc tgaaccttca gaaccttang	840
gtcccgccat cacgcctgta aagttggatt cccga	875

<210> 444
<211> 756
<212> DNA
<213> Homo Sapiens

<400> 444	
cttttaact tgcaatgntt gnctttattt tggctttat atttcaaag ngaaaagaaa	60
tagtactgag tcaatttctt tttggtttt taaatattt gtc当地atgnat ttacnagcct	120
taaagttgtct ctaaagattt caagagtatt aagagtactt ttctcagggt agcacttttt	180
tttttttaaa caattcttgg agttctgngg nccacagcat ttccctctgn ttcaatgnta	240
tgtatgttt gattactatt gggattttt aaattttctg aagcaagctg anaggcaggc	300
ngaaagattt gatgccnaaa aaaaaaaaaa aatcttntt accttggtca ccccaaactt	360
tntcaaatct ggactaaatg ctataccta aaacaaaactt gaggggcattn ttgaagggga	420
ggggaaattta tttctctgnt tttctattat acnagttgt taccgaaact gnaaatttaaa	480
aaattaccc ggcntttgca ggcctaaaa taaattaaaa gntctcaact tttttttttt	540
gccaaacatt ttttaagta tgagncttg nttaaaaaga aaagattnaa nccaaaaata	600
ttttctataa ataataacntg nattttgggt ttaaggctcc cgccttaang nttgaagggtt	660
acttttatcc nagnnccctt tttccctcca tgaanacccc ttttttcnc ctttcccctt	720
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<210> 445
<211> 783
<212> DNA
<213> Homo Sapiens

<400> 445	
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tttatatcg ataatgaaag ttttaaccct tcattgtggg aggaacagag gaaacagcgg	120
gctcaaggta catttgaatg tgatgaagac aaagatgaaa gggagggcacc tcccaggggag	180
ggaaatttaa aaagatatcc aacaccatac ccagatgagc ttaagaatat ggtcaaaact	240
gttcaaaccat ttgtacatag attaaaagat gaagagacca atgaagactc aggaagagat	300
ttgaaaccac atgaagatca acaagatata aataaagatg tgggtgtgaa gacctcagaa	360
agtactacta cagtaaaaag caaagttgat gaaagagaaa aatatatgtt agggaaactct	420
gtacagaaga tcagtgaacc tgaagctgag attagtccctg ggagtttacc agtgactgca	480
aatatgaaag cctctgagaa cttgaagcat attgttaacc atgtatgtt tttttagggaa	540
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gaaacctcta ttaaccagcc aaaagtgcgtt gcacttagta ataacaaaaa agatgataca	660
aaggaaacag attctttatc agatgaagtt acacacacaata gcaatcagaa taccagcaat	720
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cct	783

<210> 446
<211> 866
<212> DNA
<213> Homo Sapiens

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tatccataaaa aatcaattcc tatgtaaataa gtactgaaa tcaactaaaa tgagttaaaa	120
tttacaaaga gttgttaaag ggttcaatc aaaattatataa aaactataca gtacaataac	180
caattgataa catcttggaa gaagtcaat atttgagttt acatattttt aaaagtgcgt	240
cctacttact ctgacttagca agaatggaaa gtgagtcctt ctcactttt caaaaataat	300
gttgggttgtt gtttaagctt agtcttataa aagtcttaat taaaatcaag gttgataaac	360
aaagcataaac agattaaaaa ttccccaaattt gcatttctt gtaaataaaa atgaagtgca	420
ataaccaat attgctctaa tgaaagggtt cagactagcc tcaactaaac agttatttgtt	480
cttctatggc acttttttctt ggtccaaata accatgcatt aatccttacc attacatgtt	540
actcaaattt tatttgatta catagaacaa aaacaaataa aattaatgtt ctggataaac	600
aaaattaataa aacctctatc atcaaattt tgttacagta actaggaaca aagaaaggca	660
gtttgggtggg taaaacacta ttacactgtt ccccatagaa aacccttta aagactctgg	720
aagtgttgag ttcacattta atggcacctt tagaaacagn cctttatgtt gacaccttta	780
cccaactggca ngccctaang gaccatccc ttgctctat aactttcac aagcaatttctt	840
ctaattcttgg gccagtttnc aaaagc	866

<210> 447
<211> 789
<212> DNA
<213> Homo Sapiens

<400> 447	
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aatcggtgc acttccatc ttttcctcgat ttgtcagcaa ttggatgaa gccaccaaaa	180
gatcttgcgt taataagaag aaaaaagagg caaggagaaa acgaagagaa agaaattttt	240
aaaaacaaaaa ggagaggaag aagaagaggc agcaggctag gaagactgca tcagtttta	300
gtaaagatgt tggcacctt gaaagtgggtt atactacagt gaagaaacctt gaatcaaaga	360
aggaacagac cccagagcat gggaaagaaaa aacgtggcag aggaaaagcc caagttaaag	420
caacaaatgtt atccgaagac gaaatcccac agctggtacc aataggaaag aagactccag	480
ctaattttttt agtagagattt caaaaaacatc ccacaggaaa gaagtctcca gcaaaagagtc	540
ctaattccatc cacacctcgat gggaaagaaaa gaaaggctt gccagcatctt gagacccaa	600
aagctgcaga gtctgagacc ccaggaaaaa gcccagagaa gaagccaaaa atcaaagaag	660
agcagtgttgg gaaaaaaatgc ttgcgtggg gaaaaaaatgtt gccgaagaca gacttcaaaa	720
aagccagang ccaggttttcc ccactccttag taaatctgtt agaaagctt ccacaccccc	780

aaaaaaatgg

789

<210> 448

<211> 820

<212> DNA

<213> Homo Sapiens

<400> 448

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cctgcctcag cctccctagt agctgggatt acaggtgtcc accaccatgc ccaattaatt	180
tttgtatttt tggcacagac agggtttcac catgttggcc aggtatgtct cgatctcggt	240
gaccttgcga tccgcctgcc tcggcctccc aaagtgcgtgg gattacagggc gtgagccacc	300
gccccctggac tacttatgga ggttttaaaa aatcttttaa gtccaggccct gacgtttaga	360
gaagggttaca aaggcggcca ggatctgagt atttccaaaa agctctggag gcagcattga	420
gttttccttc cagttgaatc actgacttta ggtcgactgg ggtactttgg gttttttggg	480
ccattttttg ggggtgtggg aagcttttct cacagattta cttaggagtggt tgaaaaactt	540
gcccctctggc ttttttggag tctgtctcgc atcttttttc cccagcgaag gactttttc	600
cttcactgcc tcttcttga tttttggctt ctctcttgg gctttccct ggggtctcag	660
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gagggggngc ctgggggatta ggactctttt gctgggana cttctttct tgnnggnang	780
tttttgaac nntactttt ccaatttagc ctggaggcct	820

<210> 449

<211> 936

<212> DNA

<213> Homo Sapiens

<400> 449

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agggtgaaaga gttgatgtgc cagatttgcgcatcagctaa ggaacatgaa gcagagataa	180
ataagttgaa cgagctaaaa gagaaccttag taaaacaatg tgaggcaagt gaaaagaaca	240
tccagaagaa atatgaatgt gagttaaaa atttaaggaa agccacctca aatgc当地	300
aagacaatca gatatgttct attctcttgc aagaaaatac atttgtagaa caagtagtaa	360
atgaaaaagt caaacactta gaagataacct taaaagaact tgaatctcaa cacagtatct	420
taaaagatga ggtaacttat atgaataatc ttaagttaaa acttggaaatg gatgctcaac	480
atataaagga ttagttttt catgaacggg aagactttaga gttaaaattt aatgaatttat	540
tactagctaa agaagaacag ggctgtgtaa ttgaaaattt aaaatcttagt ctagcaggtt	600
taaataaaca gtttgctat acttggaaac agcataacag agaagtacag agtcttaagg	660
aacaccatca aaaagaaaata tcagaactaa atgagacatt tttgtcagat tcagaaaaag	720
aaaaaaatcaa cattaatggt tggaaattcaa ggtcttaang gacagtgtga aaacctaccg	780
ccaggaaaaag caagaagcca ttttaaantt ntgagagnntt acccagagga ttttggaaat	840
ttcccaancn gaactggggg gaatctgtcg ggaaaaatag gtcaggagtt cgaatcatgg	900
aaccaccacg aggcccttgc ngtcatgacc ttagca	936

<210> 450

<211> 806

<212> DNA

<213> Homo Sapiens

<400> 450

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aacagtggaga tctctgagca catggctgt acctcaacca ctttctatc accagggtct	120
agaatagttg ggcattttaaa taaaatttgc taaaatgaatg aaaaatccaa aataaatcat	180

gaagccattt ataaatcaca ccaatcttc	ttgggttaaa caatagaaa	taacactttt	240
gaaagagaag gcaaacagg	gttagagggg caagaatgt	agctcgagga	300
acgaactgt	ttttaacaa ctcatattt	ggctactata ttcccata	360
ctaacaagaa	tctgtctaat taatttgac	aacatctgca	420
ttcttccaac	tctttactg aagacagagg	atcatttt acagaagg	480
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ggctttagg	tttcatgtt ctttataaa	aatttttct ttttattat	600
tttgctacat	gttgagata ctttttcaa	cttgaattaa aagaatctga	660
ttggttttc	attagcattc ttcattcta	gaagatccag actgcangn	720
ggactggaat	tcttctaact ctcccc	ttttcttgg ntcataggcc	780
tcttcaatta	aggacttaag gtctt		806

<210> 451

<211> 909

<212> DNA

<213> Homo Sapiens

<400> 451

ctgagctctt ccaggcaag aaatatgacg	ggccagaagt ggatgtgtgg	agtctggggg	60
tcattttata cacactagtc agtggctcac	tccctttga tggcaaaac	ctaaaggaac	120
tgagagagag agtattaaga gggaaataca	gaattccctt ctacatgtct	acagactgtg	180
aaaaccttct caaacgtttc ctgggtctaa	atccaattaa acgcggcact	ctagagcaaa	240
tcatgaagga caggtggatc aatgcaggc	atgaagaaga tgaactcaa	ccatttgg	300
aaccagagct agacatctca gacaaaaaa	gaatagatat tatggggaa	atggatatt	360
cacaagaaga aattcaagaa tctcttagta	agatgaaata cgatgaaatc	acagctacat	420
atttgttatt ggggagaaaa tcttcagagc	tggatgtct tgattccagt	tctagcagca	480
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cctcaccaca aagtgcagag aagtgtttct	tcaagccaaa agcaaagacg	ctacagtgc	600
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tgcagatagg tgaccctcaa agaagatggg	aaatttcctt ccngaaaatc	aaagtggcag	720
tgctgggtgg aaggaaangg gaattgcttc	cagccaggc ccatgctttg	ggnaatgcca	780
ggtatncc	aataaggcgg atattcctgg aacgccagga	aaagctccac tggnccttag	840
tagtancna	gcatctggtg ggaatgacnc	gaccgaaatt ncttaagg	900
agaacttcc		tgcagtggag	909

<210> 452

<211> 672

<212> DNA

<213> Homo Sapiens

<400> 452

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aaaccacagg cntgaactgn aaacctgtct	taactatgaa ctggnc	tttaattct	180
tannngccat tcantatttc nntccttgg	aactgtatg ttntagcacc	ggatgtatctc	240
ccgnanaggt nctagaanng acngnctg	agnngangga gatnctccn	tatacaccac	300
ttnanacna tacgtcnan tttcanaccn	acccagacgg nangcacatg	gngatggggc	360
cncacnccna ctntnanggn aacggaagta	gggcaggnng	cgcatnggtt	420
aatgtattgc attcgnaaaa aaaaggccag	nttccnatcc caggcgtgct	ctngacctna	480
gacttaatn ncatgattta naanatncag	nacgntattt	cctaaatntt attctataca	540
tttccatcag tggtnagga aaacactta	aatgcactn anttccacat	canannact	600
gnngttacag nttagctca ttggcaatt	tttngaagca	attttttng aaangctntt	660
ggaatgnccc cc			672

<210> 453

<211> 834

<212> DNA

<213> Homo Sapiens

<400> 453

aagaagccaa	gaagtctgaa	gaaccaagaa	ttcggaagaa	gccgggaccc	aagccccgat	60
ggaagaagaa	gcttcgttgc	gagagggagg	agcttcccac	catctacaag	tgtccttacc	120
agggctgcac	ggccgtgtac	cgaggcgctg	acggcatgaa	gaagcacatc	aaggagcacc	180
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acgaatgtgg	acaaaccttc	aagcagcgg	agcaccttc	cgtccaccaa	atgcgacatt	360
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tcaagtagcca	catgaccaaa	cacaaggctg	agactgagct	ggactttgcc	tgtgaccagt	480
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gtgcacccgc	atgggaggg	cttgccgncc	ttgggtctgg	angcgggctt		780
ggtgtccggc	tcaagtagcc	ttctttgntc	ttgggaccag	tgggttattt	tccc	834

<210> 454

<211> 703

<212> DNA

<213> Homo Sapiens

<400> 454

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tacaaatctc	ctcgactgt	ttagtgggaa	aaggaatcaa	ttatattatga	actgtccggc	120
cccaagtac	tcagcgtttgc	cggaaaata	aaccactgt	cccagagcag	aggaaggcta	180
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ccatgcgggt	gcacacgaag	ggtgaggctg	acacagccac	tgcggagtcc	aggctgctan	300
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aaaccgcgg	ccacactgg	cacaggcaaa	gtccagctca	gtctcagcct	tngtgggt	540
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aggctggct	nccgaatgtc	gcatttgggg	gacgaaaaag	gtgcctccgc	tgcttgaaag	660
gnttggccca	atnngtaca	agatata	ccccacctt	ggg		703

<210> 455

<211> 825

<212> DNA

<213> Homo Sapiens

<400> 455

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ttgacagtga	agacaaga	aatggtgagg	acaccgacaa	tgaagaagg	gaagaagaga	120
atccttgg	gataaaag	aaaccaga	aagcagg	tgaagctg	gaaagaggag	180
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aagatgacaa	ggcagaagg	gaagagg	tggcacac	agctgatg	caagatgg	300
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tggagctggc	ttgggcccgc	cctgaga	agcagg	gac	ggaagtgg	600

ctgcagatgc aaaccaggca gaaggccatg aatcgaattt cattgcccag ttggcccttc	660
agaacacacc agaaaaaaca cacagagttt taagaggaaa cctgggcagg cttgacaatt	720
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<210> 456	
<211> 740	
<212> DNA	
<213> Homo Sapiens	
<400> 456	
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<211> 726	
<212> DNA	
<213> Homo Sapiens	
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<210> 458	
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<213> Homo Sapiens	
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ataaaaagaaa aaggcaagcc acttatgctg aacccaagaa caaacaaggaa aatggcattt	180
actttacaag aacgacaaat gcttggctt caaggacttc tacccccc aatagagaca	240

caagatattc aagccttacg atttcataga aacttgaaga aaatgactag ccctttggaa	300
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<210> 459
<211> 761
<212> DNA
<213> Homo Sapiens

<400> 459	
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taaggcttga tttagttcca gaaaataaaat aggttaaattt ttaatattt ccctagctct	180
gtctgctata gggaaatttca gagttgaag gtaagatgaa gcagatataat aagaacattt	240
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gaattaaagc atcacaacta tctgatttga gggtaatggg gggcaatgca atcaatcaac	540
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gagaacaaaa cccagaaaa cacccttaaa actgaagaca ttatcttcc ttggctgaaa	660
aaagggggttc cctggagcac angaaagggtt ttatcaaggg aggcttctat tcngtaatca	720
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<210> 460
<211> 876
<212> DNA
<213> Homo Sapiens

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<211> 689
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 <213> Homo Sapiens

<400> 461

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 <211> 784
 <212> DNA
 <213> Homo Sapiens

<400> 463

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<211> 885

<212> DNA

<213> Homo Sapiens

<400> 467

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caaaaanggc	agcaactactt	tnttgaccac	ccccacggg	ggacggctt	aatgccatt	840
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<210> 468

<211> 748

<212> DNA

<213> Homo Sapiens

<400> 468

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<213> Homo Sapiens

<210> 470
<211> 892
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<400> 471

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<211> 852

<212> DNA

<213> Homo Sapiens

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<211> 804

<212> DNA

<213> Homo Sapiens

<400> 473

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<210> 474

<211> 819

<212> DNA

<213> Homo Sapiens

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<211> 721

<212> DNA

<213> Homo Sapiens

<400> 475

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gagagacaca tctcgccaag taaaaaaaata tccattatgc accaccaagt ctctgcacgc	540
gctctctctt ttctcgctc atactagct ttcattgcctc ggcaccacca tcaatcccac	600
acaaggtttc aaaagttcag acagccctt gttccatata cacaggcctt gcgttcatag	660
cggtgatacg acttcctgga aattaagagt ancggataaa aatgggacac ccaccggtaa	720
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<210> 476

<211> 442

<212> DNA

<213> Homo Sapiens

<400> 476

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ttccaccntt nttganacn ccnganctna nngggganct nnngnttcang ncctccngca	180
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nttncntatc agtaccagaa gagacccncnc nccntncage nttcncagca gtngncaaag	300
gggttaggggn agtccangta tcatttnat taccacattc atctaagggg gtttatctaa	360

nacaaaaanc tcanttaan gtntccanc anangnggan gncctngaa ngcaaaaanc	420
nttcgnccat nattggctat ca	442

<210> 477
<211> 878
<212> DNA
<213> Homo Sapiens

<400> 477	
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gatgagccca ttgaaatacc atcggaaagac gatggggacgg tgctgtctc cacgggttaca	180
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ggtgtccggc tggtagaagg aattctgcatt gcccagatg ctggctgggg aatctggtg	300
tatgttgtca actatccaaa agataacaaa agaaaaatgg atgagacaga tgcttcatca	360
gcagtgaaag tgaaaagagc agtccagaaa acatccgatt taatagtgtt gggtctccca	420
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gtgcaggtca agaaagatct taagactggt cattcaaagg ggTTGGCTT TGTCGTCTT	540
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gtgtttgtgg ggcgctgtca gaggacatga ctgaggatga agctgcggga gttcttctt	720
agtaccgggg atgtgatgga tgtctttatt ccccaagccc ntcaagggc ttttggctt	780
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<210> 478
<211> 768
<212> DNA
<213> Homo Sapiens

<400> 478	
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ttcaaaatct tcttagggtt aaataaatac ccgtatctat gcagtagccat aaacatgtt	180
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gctgagtaat agtgcagttt catttttaggt ggggtcaccc agacttattc aaaacttagat	420
ttcaaaagaa aaaaaaaaaat tttcactttt gccaatgcaa gaacaaatac caattaagtc	480
tgggtatcag gtgtcaatgc atgacaggtt atgaatccat ttgacttgag acaactttt	540
aaataagttt atttgaagca aaataaacta ctgccaagaa actttatgaa agttccatct	600
caaaagggtt aaaaaagggg aattaactgc tatgaattt ttgcatttgc ggcgtcaaaa	660
gacgcccggcc tggatgatgcc gtgtatgatccattt gagaagcat gtagaccgna	720
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<210> 479
<211> 815
<212> DNA
<213> Homo Sapiens

<400> 479	
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ttcatcagca	gtgaaaagtga	aaagagcagt	ccagaaaaaca	tccgatttaa	tagtgttggg	420
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tcttatggtg	caggtcaaga	aagatcttaa	gactggcat	tcaaagggtt	ttggctttgt	540
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cagaaaagtg	tttggggggg	cgctgtacag	angacatgac	tgangataan	cttcnggagt	720
tctttttta	ataccgggat	gtgatggatg	cttcatttcc	caaccattc	agggcctttg	780
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<210> 480  
<211> 812  
<212> DNA  
<213> Homo Sapiens
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<210> 481  
<211> 1127  
<212> DNA  
<213> Homo Sapiens
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gagaatccga agaagaaaat ctcaataaaat ctgaaataag tcaagtgttt gagattgcac	180
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agaactttgt gaccaagggtt tcgggttgggg agtttgggg ggaaggtgaa gggaaaagca	300
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aataaacatct cttcaggcca cgtaccccat ggacctctca cgagaccctn tgagcaactg 1080
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<210> 482
<211> 773
<212> DNA
<213> Homo Sapiens

<400> 482	tacccggccctt gcttcgtttt gaacggatcc agcctttttt caaaaaaaa acaaaaccca tagtcaagcc acagacaagg ccagaatatg gccaggggat caatccgatt agccgactgg cccagatcca gcaggccaaa aaggagaagg agccagatgt cacgcttcgc acagagcgag gcctcccgcg cgcgcaggat tttgtatgc aggtgaaggt tgaaaaccac actgcagaag gaacgggcac caacaagaag gtggccaagg gcaatgcgc cgagaacatg ctggagatcc ttggtttcaa agtccccca ggcgcaggcc cccaaacccgc actcaagtca gaggagaaga caccataaaa gaaaccaggg gatggaaagaa aagttaacctt ttttgaaacct ggctctgggg atggaaaatgg gacttagtat aaagaggatg agtttcaggat gccttatcta agtcatcaggc agctgcctgc tggatttttccatgtgc cccgagggtcgc ccaggctgtg ggagtttagtc aaggacatca caccataatgttttaccaggc cagctccgaa tcctgccaag gccacgtaa ctgccatgtat agcccgagat ttgttgtatg ggggcacccgc gcccacagcc cgagaccatt ttaaaaata acatcttttccatgtca ccccatggac ctctcacgg accctntgag caactggact atctttncag agtccaggat ttncaggtt aataccaaga ctt	60 120 180 240 300 360 420 480 540 600 660 720 773
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<210> 483
<211> 794
<212> DNA
<213> Homo Sapiens

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 ggcaagttgg gaggggacca acctagcagt agnggcattt ganaataaat tancaaaaaa 180
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 aaaaattcca gcgtaaacaa tgaatggaag cagtacttaa ctgcagggc taccagcctt 300
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 gatcatatcc ttagtgttag tgaaagctaa gtcctcaaga gccatatgta tagatncaca 540
 atgtttttta ataatcttta aaacagagat caaagttcat ttaagnccctg tttgcattac 600
 caaaataaaa aatgaaataa aaatgaaacc aaatgaacat ctaangttt aaattcctaa 660
 atnggccaat ttatncaact ggnggggaga cttattcaag ggtttgaaa gtccaggaac 720
 tggtttcaag ctggaacccca gggggcccc acaatttggc attcnctgga aactggccct 780
 ggggttaagc caaa 794

<210> 484
<211> 788
<212> DNA
<213> Homo Sapiens

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<400> 484
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gttcaaaggc ccagagactt ctgagtatgt tgatggatgt aaaaacatgc aatgaggtgg    180
acctggagaa ttctgcagat tggaaagtga agacaataac aagtgcctt aAACAGTATT    240
tgaggagtct tccagagcct ctcatgacct atgagttaca tggagatttc attqttccaq    300

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ccaaaagcgg cagccagaa tctcggtta atgcgatcca tttcttggta cacaaactgc 360
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 actccaagca gaacctgatg actgtggcaa acttaggagt ggtgtttgga ccaactctga 480
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 gaaaatctta attgaaaacc atgaaaagat ttttggacg ccgnccgata ctacattccc 600
 tgagcccaccc tgccctgtcag catcaccccc aaatgcgcca ccaangcagt cnaagagaca 660
 agncagaga accaagaagg cccgtgggcc gtctacaatc tttggctgga gctggaaaga 720
 tggtaaat ctttacccctt tccanggagg acacccctta ccacagtctg gactcacttt 780
 tcttcccg 788

<210> 485
<211> 430
<212> DNA
<213> Homo Sapiens

<400> 485
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 tttanaatcg nacgacganc tgctcaggggaa ggagagggag ccnnngtggc tctggggc 360
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 atgctgngat 430

<210> 486
<211> 831
<212> DNA
<213> Homo Sapiens

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 tttgtacttc tgaaattgtt acttctatac cgtgcccctt ggcaggaaatg gcccttctcc 180
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 tgcctgttcc tggagaagaa tcacagttga cacccagaaa agtctncca aatttnctga 780
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<210> 487
<211> 728
<212> DNA
<213> Homo Sapiens

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atgttggccca ggctggtctt gaactcctga cctcaagtga tccaccccca cccccattgg	240
cttcccagag ttctggatt acaggcgtga atcaccgcgc ccagccaaa tcgcccgaagt	300
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attaagtca attacaactt tggtaatgg aaacacaggg tcttttctg aaaaaatgcc	660
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taaaatgc	728

<210> 488
<211> 788
<212> DNA
<213> Homo Sapiens

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aatgggac 788

<210> 489
<211> 875
<212> DNA
<213> Homo Sapiens

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<210> 490

<211> 844

<212> DNA

<213> Homo Sapiens

<400> 490

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aaggtgaagg gaaaagcaag aagattcaa agaaaaatgc cgccatagct gttcttgagg	180
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tgctggagat ccttggttgc aaagtcccgc aggcgcagcc caccaaaccgcactcaagt	540
cagaggagaa gacacccata aagaaaccag ggatggaag aaaagtaacc tttttgtAAC	600
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taggaagttt gtcaaggaca tnacacccaa gattttacca ggcagctcg aatcttgcca	780
nggcncngta ctgccatgtat agcccanagt tgttgtattt gggcancttt gccccaggccc	840
ggga	844

<210> 491

<211> 825

<212> DNA

<213> Homo Sapiens

<400> 491

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gtttcagctg aaccagangg ccccaattt gcatcactgg aactgnccctg gtttagccca	780
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<210> 492

<211> 946

<212> DNA

<213> Homo Sapiens

<400> 492

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gagaatccga agaagaaaat ctcaataaaat ctgaaataag tcaagtgttt gagattgcac	180
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agaactttgt gaccaaggtt tcgggtgggg agtttgtggg ggaaggtgaa gggaaaagca	300
agaagatttc aaagaaaaat gcccacatag ctgttctgaa ggagctgaaag aagttaccgc	360
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<210> 493

<211> 804

<212> DNA

<213> Homo Sapiens

<400> 493

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ttcctgattt tgcatgttct cattccaaa gtagtctacc ttatgttaca ctcaaaggta	180
gcacttggta aaactacatg acagaaacag gctgcaaagg tggacaaggg gaagcatgtc	240
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<210> 494

<211> 856

<212> DNA

<213> Homo Sapiens

<400> 494

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<210> 495

<211> 757

<212> DNA

<213> Homo Sapiens

<400> 495

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agataagatt ttatTTTca aattacatat tatGCCAACC agcctgctt ggactcagag	180
gttcaaaaaac tttgctttta ttacgaagaa catntggact gtagacacct ntaacgaaac	240
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<210> 496

<211> 1759

<212> DNA

<213> Homo Sapiens

<400> 496

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accaggaaga gcagctgaca gtgaattcaa aggcatcaga gattttgac aagatttctc	180
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 <211> 842
 <212> DNA
 <213> Homo Sapiens

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 tgagagaggg aatcattgtc actggaaagc ggctggggac tctgtgttg acttatgttag 180
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 tcactgtctgg agagaaggcc atacaaccgg aaccggggca tgaaggaagc acttgagaag 780
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<210> 498
 <211> 707
 <212> DNA
 <213> Homo Sapiens

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 tcaaaaggggg ttgttctctg gcggggcagag gtgggtgtca caagttgctt agtgggggag 180
 ctttgagcc aggtatgagcc aggagaagga atttcacaag gtaatgtcat cagttaggc 240
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 aatctcttta tttaactgtc cagatttctt ttgaaattct tccttaagca ttcttccttg 600
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<210> 499
 <211> 772
 <212> DNA
 <213> Homo Sapiens

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 ccacagacac gctccaggag ctgctggacg tgcattgcgc ctgtgagagg gaagccattt 180
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aatacatggc ccaaattggag aagaagtgg aggangaaag ggaaaaaccnt ntcagagagc 720
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<210> 500
<211> 787
<212> DNA
<213> Homo Sapiens

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ttcctcatct cccatgaggc ttctccata gccatcatgg aactcttcat ctctgagga      180
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<212> DNA
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<210> 502
<211> 626
<212> DNA
<213> Homo Sapiens

<400> 502

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<210> 503
<211> 884
<212> DNA
<213> Homo Sapiens

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<210> 504
<211> 612
<212> DNA
<213> Homo Sapiens

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<210> 505
<211> 2215
<212> DNA

<213> Homo Sapiens

<400> 505

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<210> 506

<211> 742

<212> DNA

<213> Homo Sapiens

<400> 506

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<211> 735
<212> DNA
<213> Homo Sapiens

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gttggcagg ttggggccccc acagcccaga aggcttttgtt agtggcacgc acagtctctg	420
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<210> 508
<211> 666
<212> DNA
<213> Homo Sapiens

<400> 508	
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<210> 509
<211> 818
<212> DNA
<213> Homo Sapiens

<400> 509	
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<210> 510
<211> 651
<212> DNA
<213> Homo Sapiens

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 ctgcgttcatt ccgaaggcatt tttctggc tgccgatgt ctggnaatg ccggcaacca 600
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<210> 511
<211> 712
<212> DNA
<213> Homo Sapiens

<400> 511
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 attttctctt ttaccaccac tgggtcattt ctccctgtct tcaaaangct gcagcccttt 660
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<210> 512
<211> 850
<212> DNA
<213> Homo Sapiens

<400> 512
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<210> 513

<211> 727

<212> DNA

<213> Homo Sapiens

<400> 513

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<210> 514

<211> 877

<212> DNA

<213> Homo Sapiens

<400> 514

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tgaagactgc gaagggtglocalg gtggaggaca ccaaggctc当地t ggtgcaaa当地ac gc当地agctggg	180
gccaggagaa gt当地ggc当地cg gctgccc当地agt cctccglocalg gaccatcacc cgc当地ctcgctg	240
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ggaaggc当地gt taccacc当地ccag aagt当地gggccc t当地gtglocalg ggctt当地ancc gnactatggc	780
ccggagtglocalg ccaatggc当地ta cctglocalgact ggtt当地ggacca ttgtactt当地gg tgaccctt当地gc	840

aaaagccccag ccccaagaact tgaagccagc agtttgc

877

<210> 515
<211> 685
<212> DNA
<213> Homo Sapiens

<400> 515
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ngcttgcaac cctttcttgg ngctn 685

<210> 516
<211> 790
<212> DNA
<213> Homo Sapiens

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<210> 517
<211> 747
<212> DNA
<213> Homo Sapiens

<400> 517
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caatggctgt ttcatgttt cagcttaac aagaatgtcg gattacaggt cctcactttc 120
taccaaggca gtattcagtg tcaggtgaga tgggtggcc tcaggttggaa acgtctgttt 180
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<210> 518
<211> 926
<212> DNA
<213> Homo Sapiens

<400> 518					
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actgtAACCC	cagtgaagct	gccagtgaag	aaagtaacag	tgagatagag	360
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<210> 519
<211> 789
<212> DNA
<213> Homo Sapiens

<400> 519					
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caccttcaa	aangggaaaa	ctggatgaag	taacnnntaa	agnatataat	720
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<210> 520
<211> 827
<212> DNA
<213> Homo Sapiens

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<210> 521
<211> 710
<212> DNA
<213> Homo Sapiens

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<212> DNA

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<400> 537

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ttcaaatcca tattttatct gaaatacatt tcctgcaaca aaacattatt agaagagtta	180
aattatttat ttaaaaaaaaaa ttttttagag acagggtctc attctgttgc ccagggttgg	240
gtgcagtggc atgatcatac ctcactgtaa catcaaattc ctaggctcaa gtgatcttct	300
tgcctcagcc tnttgaacag ctgggactac aggcatggac taccatgcta ggcttttgt	360
tttttaataa gagacaaggt cttattatcc tgcctaggct ggtcttgaat gcctagcctc	420
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ggaattaagc cactttaac ggttcttgaa tcnncaaaga atgtgnatt gatgagttcn	600
cactatataa aaattcagcc caaacatcca cattcnaaca tnccagctgt aagactgact	660
tttaacttaa aattttgaaa natnaaaattt aaaaatgcc tnccaaacta ctgggaacac	720
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<210> 538

<211> 869

<212> DNA

<213> Homo Sapiens

<400> 538

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taaaaaacgt ttcacacaccc ctatttatca acctaaattt aaaacagaaa aggagtttat	180
gcaacatgcc cgaaaagcag gattggttat tcctccagaa aaatcgacc gttccataca	240
tctggcctgt acagctggta tatttgc tcatgttgc cctgagggtg atgcacgcata	300
atcatcttt tcaaaggagg gactgataga gagaactgaa cgaatgaaga agactatggc	360
atcacaagtgc tcaatccgga ggataaaaaga ctatgatgcc aactttaaa taaaggactt	420
ccctgaaaaaa gctaaggata tcttatttgc agtcacccct tgcataataa actcagacca	480
tgaccgactt cataccttgg taactgaaca ctgttttcca gacatgactt gggacatcaa	540
atataagacc gtccgcttgg gctttgttgc atcttttagag ccctctcatg ttgttcaagt	600
tcgctgttca agtatgatga accaggcata cgtgtaccgn ccagatcacc gtaccgcata	660
cacacccggc agactcttggc catctatgac cgggtttggc cgggttgc tatggccag	720
gnagatgtcc ccaggatgtc ctggaaagtat gttggantcg aaaagcagn tgcacaaancc	780

ctatggaaagc tggagaagcn tacccaagac ggtnccccct gggcacccccc ttaagcaggc 840
 catcctttaa aacggggatg atcccttgg 869

<210> 539
 <211> 760
 <212> DNA
 <213> Homo Sapiens

<400> 539
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 ccagtcttca tttcctttaaa gtcacatcg tcacaagttag gctcatcttc cacttctgcc 180
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 ctctgaaaca tactgtctt catctagact cagaagctag acataaaaatt taaaaaagaa 420
 gagtgtccat ggccatgtta tacctgccac ctgcttagggc ccagtcata gtcatggttg 480
 ctgatgatga gactgctgaa aagacactgag caggatggga gagaacaaag gtagttcttt 540
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 tcaccctaga aagtcatttt tgncatcagg gctaaccctga ngcttctggg gcctctccctt 660
 gggcctcttc ataatcttct tctgggnnttc agcttgaagg gccagggat tcatnaccgg 720
 gctttaaagg gatggggcct gcttaagggg ggtgccccat 760

<210> 540
 <211> 874
 <212> DNA
 <213> Homo Sapiens

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 tcttgcactc atgcaaaaga aactggcaga ttatctgaaa gtgcctttag acaataaaaca 240
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 tggtggtctg ctgggtggac tcaatgttct cgatgccaat ctctgcttga aaggagaaga 360
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 tggatggatgc aaggagcatg aaagaattac tgatgtcctt gatcaaaaaaa attatgtgga 480
 agaacttaac cggcacttga gctgcacagt tggggatctt caaaccaga tagatggctt 540
 ggaaaagact aactcaaagc ttcaagaaga gctttcagct gcaacagacc gaatttgctc 600
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 aaaagagtgt agaagatacn aaacaggatc caaagtttag gtcggagactt acagccaact 720
 tcgcaagggtc tggatgaaat gtcnnntgatg tggtaagca cttaaagagg agaagaaagt 780
 ccggttggaa ctggaaaaaa gaactggagn tccaaatggg aatgaaaacc caaatnggaa 840
 atgccatgaa gttcctggna aaggcccccc ccaa 874

<210> 541
 <211> 729
 <212> DNA
 <213> Homo Sapiens

<400> 541
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 gcatgaatca ggtttttaga aggaaggttag gagagggaaaa ctactcacta gcagaactga 180
 actgctgtaa aataggttaa attcttggaa aagtgaaaaa tgatagtagc aaaatcatga 240

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ggagtgccag	tgaccggca	agaaaatttga	ttctttcctt	tgattctctt	gggaaagaac	420
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gaggacggac	gttcaggagg	ccgtggagga	gcagcgctgc	aggagcaggg	tgtggcagct	540
gtcgcacact	cgcaccggct	tggggtagga	gggcaggggc	cagctcggt	ctgggagcag	600
gtgtttgcan	aagatgtggc	ccacagttcc	ggcagtnngt	gtcttctccg	gggaaaatgg	660
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<210> 542
<211> 830
<212> DNA
<213> Homo Sapiens

<400> 542						
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ttggtcctt	ggagctggtg	gagaaacttt	gtccagaagc	atcagatata	gcaactgt	300
tcagaaatct	tccagaatta	aagacagctg	tggaaagagg	ccgagcgtgg	ctttatctt	360
cactcatgca	aaagaaactg	gcagattatc	tgaaagtgc	tatagacaat	aaacatctt	420
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gtggcaagga	gcatgaaaga	attactgtat	tcttgatca	aaaaaattat	gtggaaagaac	660
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aaaaagacta	actcaaagct	tcagaagagc	nttnagctgc	accagaccga	attttgc	780
tttcaagaaaa	nacagcacn	gttaagaaaa	ccaaatggaa	ttaatttcag		830

<210> 543
<211> 733
<212> DNA
<213> Homo Sapiens

<400> 543						
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ggagtgc	tgaccggca	agaaatttga	ttctttcctt	tgattctt	gggaaagaac	420
acat	ccccctgga	gaccacagg	gtttggact	gtccgtgagg	ctgtgctcct	480
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tgttgcaaaa	naatgtggcc	acagntncgg	cagtgggtgc	tttntccggg	aaaagggaga	660
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<210> 544
<211> 852
<212> DNA
<213> Homo Sapiens

<400> 544

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<210> 545

<211> 414

<212> PRT

<213> Homo Sapiens

<400> 545

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						20			25					30	
Tyr	Gln	Arg	Thr	Cys	Glu	Asp	Leu	Lys	Glu	Gln	Leu	Lys	His	Lys	Glu
						35			40				45		
Phe	Leu	Leu	Ala	Ala	Asn	Thr	Cys	Asn	Arg	Val	Gly	Gly	Leu	Cys	Leu
						50			55			60			
Lys	Cys	Ala	Gln	His	Glu	Ala	Val	Leu	Ser	Gln	Thr	His	Thr	Asn	Val
						65			70			75		80	
His	Met	Gln	Thr	Ile	Glu	Arg	Leu	Val	Lys	Glu	Arg	Asp	Asp	Leu	Met
						85			90			95			
Ser	Ala	Leu	Val	Ser	Val	Arg	Ser	Ser	Leu	Ala	Asp	Thr	Gln	Gln	Arg
						100			105			110			
Glu	Ala	Ser	Ala	Tyr	Glu	Gln	Val	Lys	Gln	Val	Leu	Gln	Ile	Ser	Glu
						115			120			125			
Glu	Ala	Asn	Phe	Glu	Lys	Thr	Lys	Ala	Leu	Ile	Gln	Cys	Asp	Gln	Leu
						130			135			140			
Arg	Lys	Glu	Leu	Glu	Arg	Gln	Ala	Glu	Arg	Leu	Glu	Lys	Glu	Leu	Ala
						145			150			155		160	
Ser	Gln	Gln	Glu	Lys	Arg	Ala	Ile	Glu	Lys	Asp	Met	Met	Lys	Lys	Glu
						165			170			175			
Ile	Thr	Lys	Glu	Arg	Glu	Tyr	Met	Gly	Ser	Lys	Met	Leu	Ile	Leu	Ser
						180			185			190			
Gln	Asn	Ile	Ala	Gln	Leu	Glu	Ala	Gln	Val	Glu	Lys	Val	Thr	Lys	Glu
						195			200			205			
Lys	Ile	Ser	Ala	Ile	Asn	Gln	Leu	Glu	Glu	Ile	Gln	Ser	Gln	Leu	Ala
						210			215			220			
Ser	Arg	Glu	Met	Asp	Val	Thr	Lys	Val	Cys	Gly	Glu	Met	Arg	Tyr	Gln
						225			230			235		240	
Leu	Asn	Lys	Thr	Asn	Met	Glu	Lys	Asp	Glu	Ala	Glu	Lys	Glu	His	Arg
						245			250			255			

Glu Phe Arg Ala Lys Thr Asn Arg Asp Leu Glu Ile Lys Asp Gln Glu
 260 265 270
 Ile Glu Lys Leu Arg Ile Glu Leu Asp Glu Ser Lys Gln His Leu Glu
 275 280 285
 Gln Glu Gln Gln Lys Ala Ala Leu Ala Arg Glu Glu Cys Leu Arg Leu
 290 295 300
 Thr Glu Leu Leu Gly Glu Ser Glu His Gln Leu His Leu Thr Arg Ser
 305 310 315 320
 Glu Ile Ala Gln Leu Ser Gln Glu Lys Arg Tyr Thr Tyr Asp Lys Leu
 325 330 335
 Gly Lys Leu Gln Arg Arg Asn Glu Glu Leu Glu Glu Gln Cys Val Gln
 340 345 350
 His Gly Arg Val His Glu Thr Met Lys Gln Arg Leu Arg Gln Leu Asp
 355 360 365
 Lys His Ser Gln Ala Thr Ala Gln Gln Leu Val Gln Leu Leu Ser Lys
 370 375 380
 Gln Asn Gln Leu Leu Glu Arg Gln Ser Leu Ser Glu Glu Val Asp
 385 390 395 400
 Arg Leu Arg Thr Gln Leu Pro Ser Met Pro Gln Ser Asp Cys
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<210> 546

<211> 2885

<212> DNA

<213> Homo Sapiens

<400> 546

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<210> 547

<211> 897

<212> PRT

<213> Homo Sapiens

<400> 547

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20 25 30	
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35 40 45	
Ser Tyr Lys Leu Pro Leu Pro Gly Pro Tyr Asp Ser Arg Asp Asp Phe	
50 55 60	
Pro Leu Arg Lys Thr Ala Ser Glu Pro Asn Leu Lys Val Arg Ser Arg	
65 70 75 80	
Leu Lys Gln Lys Val Ala Glu Arg Arg Ser Ser Pro Leu Leu Arg Arg	
85 90 95	
Lys Asp Gly Thr Val Ile Ser Thr Phe Lys Lys Arg Ala Val Glu Ile	
100 105 110	
Thr Gly Ala Gly Pro Gly Ala Ser Ser Val Cys Asn Ser Ala Pro Gly	
115 120 125	
Ser Gly Pro Ser Ser Pro Asn Ser Ser His Ser Thr Ile Ala Glu Asn	
130 135 140	
Gly Phe Thr Gly Ser Val Pro Asn Ile Pro Thr Glu Met Leu Pro Gln	
145 150 155 160	
His Arg Ala Leu Pro Leu Asp Ser Ser Pro Asn Gln Phe Ser Leu Tyr	
165 170 175	
Thr Ser Pro Ser Leu Pro Asn Ile Ser Leu Gly Leu Gln Ala Thr Val	
180 185 190	
Thr Val Thr Asn Ser His Leu Thr Ala Ser Pro Lys Leu Ser Thr Gln	
195 200 205	
Gln Glu Ala Glu Arg Gln Ala Leu Gln Ser Leu Arg Gln Gly Gly Thr	

210	215	220
Leu Thr Gly Lys Phe Met Ser Thr Ser Ser Ile Pro Gly Cys Leu Leu		
225	230	235
Gly Val Ala Leu Glu Gly Asp Gly Ser Pro His Gly His Ala Ser Leu		
245	250	255
Leu Gln His Val Leu Leu Glu Gln Ala Arg Gln Gln Ser Thr Leu		
260	265	270
Ile Ala Val Pro Leu His Gly Gln Ser Pro Leu Val Thr Gly Glu Arg		
275	280	285
Val Ala Thr Ser Met Arg Thr Val Gly Lys Leu Pro Arg His Arg Pro		
290	295	300
Leu Ser Arg Thr Gln Ser Ser Pro Leu Pro Gln Ser Pro Gln Ala Leu		
305	310	315
Gln Gln Leu Val Met Gln Gln His Gln Gln Phe Leu Glu Lys Gln		
325	330	335
Lys Gln Gln Leu Gln Leu Gly Lys Ile Leu Thr Lys Thr Gly Glu		
340	345	350
Leu Pro Arg Gln Pro Thr Thr His Pro Glu Glu Thr Glu Glu Glu Leu		
355	360	365
Thr Glu Gln Gln Glu Val Leu Leu Gly Glu Gly Ala Leu Thr Met Pro		
370	375	380
Arg Glu Gly Ser Thr Glu Ser Glu Ser Thr Gln Glu Asp Leu Glu Glu		
385	390	395
Glu Asp Glu Glu Asp Gly Glu Glu Glu Asp Cys Ile Gln Val		
405	410	415
Lys Asp Glu Glu Gly Glu Ser Gly Ala Glu Glu Gly Pro Asp Leu Glu		
420	425	430
Glu Pro Gly Ala Gly Tyr Lys Leu Phe Ser Asp Ala Gln Pro Leu		
435	440	445
Gln Pro Leu Gln Val Tyr Gln Ala Pro Leu Ser Leu Ala Thr Val Pro		
450	455	460
His Gln Ala Leu Gly Arg Thr Gln Ser Ser Pro Ala Ala Pro Gly Gly		
465	470	475
Met Lys Asn Pro Pro Asp Gln Pro Val Lys His Leu Phe Thr Thr Ser		
485	490	495
Val Val Tyr Asp Thr Phe Met Leu Lys His Gln Cys Met Cys Gly Asn		
500	505	510
Thr His Val His Pro Glu His Ala Gly Arg Ile Gln Ser Ile Trp Ser		
515	520	525
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Arg Lys Ala Thr Leu Asp Glu Ile Gln Thr Val His Ser Glu Tyr His		
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Lys Lys Leu Leu Gly Pro Ile Ser Gln Lys Met Tyr Ala Val Leu Pro		
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Cys Gly Gly Ile Gly Val Asp Ser Asp Thr Val Trp Asn Glu Met His		
595	600	605
Ser Ser Ser Ala Val Arg Met Ala Val Gly Cys Leu Leu Glu Leu Ala		
610	615	620
Phe Lys Val Ala Ala Gly Glu Leu Lys Asn Gly Phe Ala Ile Ile Arg		
625	630	635
Pro Pro Gly His His Ala Glu Glu Ser Thr Ala Met Gly Phe Cys Phe		
645	650	655

Phe Asn Ser Val Ala Ile Thr Ala Lys Leu Leu Gln Gln Lys Leu Asn
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 Val Gly Lys Val Leu Ile Val Asp Trp Asp Ile His His Gly Asn Gly
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 690 695 700
 His Arg Tyr Asp Asn Gly Asn Phe Phe Pro Gly Ser Gly Ala Pro Glu
 705 710 715 720
 Glu Val Gly Gly Pro Gly Val Gly Tyr Asn Val Asn Val Ala Trp
 725 730 735
 Thr Gly Gly Val Asp Pro Pro Ile Gly Asp Val Glu Tyr Leu Thr Ala
 740 745 750
 Phe Arg Thr Val Val Met Pro Ile Ala His Glu Phe Ser Pro Asp Val
 755 760 765
 Val Leu Val Ser Ala Gly Phe Asp Ala Val Glu Gly His Leu Ser Pro
 770 775 780
 Leu Gly Gly Tyr Ser Val Thr Ala Arg Cys Phe Gly His Leu Thr Arg
 785 790 795 800
 Gln Leu Met Thr Leu Ala Gly Gly Arg Val Val Leu Ala Leu Glu Gly
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 Gly His Asp Leu Thr Ala Ile Cys Asp Ala Ser Glu Ala Cys Val Ser
 820 825 830
 Ala Leu Leu Ser Val Lys Leu Gln Pro Leu Asp Glu Ala Val Leu Gln
 835 840 845
 Gln Lys Pro Asn Ile Asn Ala Val Ala Thr Leu Glu Lys Val Ile Glu
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 Ile Gln Ser Lys His Trp Ser Cys Val Gln Lys Phe Ala Ala Gly Leu
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<210> 548
<211> 1298
<212> DNA
<213> Homo Sapiens

<400> 548

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<211> 236
<212> PRT
<213> Homo Sapiens

<400> 549
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 35 40 45
 Glu Ala Ile Ser Ser Leu Asp Gly Lys Asn Arg Arg Lys Leu Ala Arg
 50 55 60
 Ser Glu Ala Ser Leu Lys Val Ser Glu Phe Asn Val Ser Ser Glu Gly
 65 70 75 80
 Ser Gly Glu Lys Leu Val Leu Ala Asp Leu Leu Glu Pro Val Lys Thr
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 Ser Ser Ser Leu Ala Thr Val Lys Lys Gln Leu Ser Arg Val Ser Lys
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 Thr Val Glu Leu Pro Leu Asn Lys Glu Glu Ile Glu Arg Ile His Arg
 115 120 125
 Glu Ile Ala Phe Asn Lys Thr His Lys Ser Ser Pro Asn Gly Thr Leu
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 Ser Ser Val Leu Lys Asn Arg Gln Ala Glu Gln Leu Val Phe Pro Leu
 145 150 155 160
 Glu Lys Glu Glu Pro Ala Ile Ala Pro Ile Glu His Val Leu Ser Gly
 165 170 175
 Trp Lys Ala Arg Thr Pro Leu Glu Gln Glu Ile Phe Asn Leu Leu His
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 Lys Asn Lys Gln Pro Val Thr Asp Pro Leu Leu Thr Pro Val Glu Lys
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<210> 550
<211> 2236
<212> DNA
<213> Homo Sapiens

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 <211> 652
 <212> PRT
 <213> Homo Sapiens

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						20			25				30		
Tyr	His	Gln	Thr	Met	Asp	Val	Ala	Val	Leu	Val	Gly	Asp	Leu	Lys	Leu
						35			40			45			
Val	Ile	Asn	Glu	Pro	Ser	Arg	Leu	Pro	Leu	Phe	Asp	Ala	Ile	Arg	Pro
						50			55			60			
Leu	Ile	Pro	Leu	Lys	His	Gln	Val	Glu	Tyr	Asp	Gln	Leu	Thr	Pro	Arg
						65			70			75			80
Arg	Ser	Arg	Lys	Leu	Lys	Glu	Val	Arg	Leu	Asp	Arg	Leu	His	Pro	Glu
						85			90			95			
Gly	Leu	Gly	Leu	Ser	Val	Arg	Gly	Gly	Leu	Glu	Phe	Gly	Cys	Gly	Leu
						100			105			110			
Phe	Ile	Ser	His	Leu	Ile	Lys	Gly	Gly	Gln	Ala	Asp	Ser	Val	Gly	Leu

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Cys Thr His	Glu Glu Val	Ile Asn Leu Ile Arg Thr Lys Lys Thr Val
145	150	155
Ser Ile Lys	Val Arg His	Ile Gly Leu Ile Pro Val Lys Ser Ser Pro
165	170	175
Asp Glu Pro	Leu Thr Trp Gln	Tyr Val Asp Gln Phe Val Ser Glu Ser
180	185	190
Gly Gly Val	Arg Gly Ser	Leu Gly Ser Pro Gly Asn Arg Glu Asn Lys
195	200	205
Glu Lys Lys	Val Phe Ile Ser	Leu Val Gly Ser Arg Gly Leu Gly Cys
210	215	220
Ser Ile Ser Ser	Gly Pro Ile Gln Lys	Pro Gly Ile Phe Ile Ser His
225	230	235
Val Lys Pro	Gly Ser Leu Ser Ala	Glu Val Gly Leu Glu Ile Gly Asp
245	250	255
Gln Ile Val	Glu Val Asn Gly Val	Asp Phe Ser Asn Leu Asp His Lys
260	265	270
Glu Ala Val	Asn Val Leu Lys	Asn Ser Arg Ser Leu Thr Ile Ser Ile
275	280	285
Val Ala Ala	Ala Gly Arg	Glu Leu Phe Met Thr Asp Arg Glu Arg Leu
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Ala Glu Ala	Arg Gln Arg	Glu Leu Gln Arg Gln Glu Leu Leu Met Gln
305	310	315
Lys Arg Leu Ala	Met Glu Ser Asn Lys	Ile Leu Gln Glu Gln Gln Glu
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Met Glu Arg	Gln Arg Arg Lys	Glu Ile Ala Gln Lys Ala Ala Glu Glu
340	345	350
Asn Glu Arg	Tyr Arg Lys	Glu Met Glu Gln Ile Val Glu Glu Glu Glu
355	360	365
Lys Phe Lys	Lys Gln Trp	Glu Asp Trp Gly Ser Lys Glu Gln Leu
370	375	380
Leu Leu Pro	Lys Thr Ile Thr Ala	Glu Val His Pro Val Pro Leu Arg
385	390	395
400		
Lys Pro Lys	Tyr Asp Gln Gly Val	Glu Pro Glu Leu Glu Pro Ala Asp
405	410	415
Asp Leu Asp	Gly Gly Thr Glu Glu	Gln Gly Glu Gln Asp Phe Arg Lys
420	425	430
Tyr Glu Glu	Gly Phe Asp Pro	Tyr Ser Met Phe Thr Pro Glu Gln Ile
435	440	445
Met Gly Lys	Asp Val Arg	Leu Leu Arg Ile Lys Lys Glu Gly Ser Leu
450	455	460
Asp Leu Ala	Leu Glu Gly	Gly Val Asp Ser Pro Ile Gly Lys Val Val
465	470	475
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Val Ser Ala	Val Tyr Glu Arg	Gly Ala Ala Glu Arg His Gly Gly Ile
485	490	495
Val Lys Gly	Asp Glu Ile Met	Ala Ile Asn Gly Lys Ile Val Thr Asp
500	505	510
Tyr Thr Leu	Ala Glu Ala Asp	Ala Ala Leu Gln Lys Ala Trp Asn Gln
515	520	525
Gly Gly Asp	Trp Ile Asp	Leu Val Val Ala Val Cys Pro Pro Lys Glu
530	535	540
Tyr Asp Asp	Glu Leu Thr Phe	Leu Leu Lys Ser Lys Arg Gly Asn Gln
545	550	555
		560

Ile His Ala Leu Gly Asn Ser Glu Leu Arg Pro His Leu Val Asn Thr
 565 570 575
 Lys Pro Arg Thr Ser Leu Glu Arg Gly His Met Thr His Thr Arg Trp
 580 585 590
 His Pro Trp Asp Leu Asn Leu Ser Pro Arg Asn Leu Lys Leu Pro Leu
 595 600 605
 Ala Leu Asn Gln Gly Gln Ile Arg Asn Ser Ser Gly His Phe Phe Glu
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 Gly Gln Cys Gly Gly Lys Gly Ala Ala Ser Arg Leu Gly Glu Asp Leu
 625 630 635 640
 Lys Asp Pro Asp Ser His Ser Phe Pro Leu Ala Gln
 645 650

<210> 552
<211> 2162
<212> DNA
<213> Homo Sapiens

<400> 552

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2162

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<213> Homo Sapiens

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 50 55 60
 Leu Ile Pro Leu Lys His Gln Val Glu Tyr Asp Gln Leu Thr Pro Arg
 65 70 75 80
 Arg Ser Arg Lys Leu Lys Glu Val Arg Leu Asp Arg Leu His Pro Glu
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 100 105 110
 Phe Ile Ser His Leu Ile Lys Gly Gly Gln Ala Asp Ser Val Gly Leu
 115 120 125
 Gln Val Gly Asp Glu Ile Val Arg Ile Asn Gly Tyr Ser Ile Ser Ser
 130 135 140
 Cys Thr His Glu Glu Val Ile Asn Leu Ile Arg Thr Lys Lys Thr Val
 145 150 155 160
 Ser Ile Lys Val Arg His Ile Gly Leu Ile Pro Val Lys Ser Ser Pro
 165 170 175
 Asp Glu Pro Leu Thr Trp Gln Tyr Val Asp Gln Phe Val Ser Glu Ser
 180 185 190
 Gly Gly Val Arg Gly Ser Leu Gly Ser Pro Gly Asn Arg Glu Asn Lys
 195 200 205
 Glu Lys Lys Val Phe Ile Ser Leu Val Gly Ser Arg Gly Leu Gly Cys
 210 215 220
 Ser Ile Ser Ser Gly Pro Ile Gln Lys Pro Gly Ile Phe Ile Ser His
 225 230 235 240
 Val Lys Pro Gly Ser Leu Ser Ala Glu Val Gly Leu Glu Ile Gly Asp
 245 250 255
 Gln Ile Val Glu Val Asn Gly Val Asp Phe Ser Asn Leu Asp His Lys
 260 265 270
 Glu Ala Val Asn Val Leu Lys Asn Ser Arg Ser Leu Thr Ile Ser Ile
 275 280 285
 Val Ala Ala Ala Gly Arg Glu Leu Phe Met Thr Asp Arg Glu Arg Leu
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 Ala Glu Ala Arg Gln Arg Glu Leu Gln Arg Gln Glu Leu Leu Met Gln
 305 310 315 320
 Lys Arg Leu Ala Met Glu Ser Asn Lys Ile Leu Gln Glu Gln Glu
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 Met Glu Arg Gln Arg Arg Lys Glu Ile Ala Gln Lys Ala Ala Glu Glu
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 355 360 365
 Lys Phe Lys Lys Gln Trp Glu Glu Asp Trp Gly Ser Lys Glu Gln Leu

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<212> DNA  
<213> Homo Sapiens
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<400> 554

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cgcaccacga	ccttcccagg	gtgacaccgc	ctcagcctgc	agtggggctg	gtcctcatca	1620
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gactcttgggt	gtatgtttc	agaaatggct	tgaagttatg	tgtttaaattc	tgctcattcg	1740
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<210> 555
<211> 493
<212> PRT
<213> Homo Sapiens

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<400> 555
Leu Leu Asp Ala Ser Glu Lys Leu Lys Leu Thr Tyr Glu Glu Lys Cys
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Glu Ile Glu Glu Ser Gln Leu Lys Phe Leu Arg Asn Asp Leu Ala Glu
   20          25          30
Tyr Gln Arg Thr Cys Glu Asp Leu Lys Glu Gln Leu Lys His Lys Glu
   35          40          45

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WO 99/04265

Phe Leu Leu Ala Ala Asn Thr Cys Asn Arg Val Gly Gly Leu Cys Leu
 50 55 60
 Lys Cys Ala Gln His Glu Ala Val Leu Ser Gln Thr His Thr Asn Val
 65 70 75 80
 His Met Gln Thr Ile Glu Arg Leu Val Lys Glu Arg Asp Asp Leu Met
 85 90 95
 Ser Ala Leu Val Ser Val Arg Ser Ser Leu Ala Asp Thr Gln Gln Arg
 100 105 110
 Glu Ala Ser Ala Tyr Glu Gln Val Lys Gln Val Leu Gln Ile Ser Glu
 115 120 125
 Glu Ala Asn Phe Glu Lys Thr Lys Ala Leu Ile Gln Cys Asp Gln Leu
 130 135 140
 Arg Lys Glu Leu Glu Arg Gln Ala Glu Arg Leu Glu Lys Glu Leu Ala
 145 150 155 160
 Ser Gln Gln Glu Lys Arg Ala Ile Glu Lys Asp Met Met Lys Lys Glu
 165 170 175
 Ile Thr Lys Glu Arg Glu Tyr Met Gly Ser Lys Met Leu Ile Leu Ser
 180 185 190
 Gln Asn Ile Ala Gln Leu Glu Ala Gln Val Glu Lys Val Thr Lys Glu
 195 200 205
 Lys Ile Ser Ala Ile Asn Gln Leu Glu Glu Ile Gln Ser Gln Leu Ala
 210 215 220
 Ser Arg Glu Met Asp Val Thr Lys Val Cys Gly Glu Met Arg Tyr Gln
 225 230 235 240
 Leu Asn Lys Thr Asn Met Glu Lys Asp Glu Ala Glu Lys Glu His Arg
 245 250 255
 Glu Phe Arg Ala Lys Thr Asn Arg Asp Leu Glu Ile Lys Asp Gln Glu
 260 265 270
 Ile Glu Lys Leu Arg Ile Glu Leu Asp Glu Ser Lys Gln His Leu Glu
 275 280 285
 Gln Glu Gln Gln Lys Ala Ala Leu Ala Arg Glu Glu Cys Leu Arg Leu
 290 295 300
 Thr Glu Leu Leu Gly Glu Ser Glu His Gln Leu His Leu Thr Arg Gln
 305 310 315 320
 Glu Lys Asp Ser Ile Gln Gln Ser Phe Ser Lys Glu Ala Lys Ala Gln
 325 330 335
 Ala Leu Gln Ala Gln Gln Arg Glu Gln Glu Leu Thr Gln Lys Ile Gln
 340 345 350
 Gln Met Glu Ala Gln His Asp Lys Thr Glu Asn Glu Gln Tyr Leu Leu
 355 360 365
 Leu Thr Ser Gln Asn Thr Phe Leu Thr Lys Leu Lys Glu Glu Cys Cys
 370 375 380
 Thr Leu Ala Lys Lys Leu Glu Gln Ile Ser Gln Lys Thr Arg Ser Glu
 385 390 395 400
 Ile Ala Gln Leu Ser Gln Glu Lys Arg Tyr Thr Tyr Asp Lys Leu Gly
 405 410 415
 Lys Leu Gln Arg Arg Asn Glu Glu Leu Glu Gln Cys Val Gln His
 420 425 430
 Gly Arg Val His Glu Thr Met Lys Gln Arg Leu Arg Gln Leu Asp Lys
 435 440 445
 His Ser Gln Ala Thr Ala Gln Gln Leu Val Gln Leu Leu Ser Lys Gln
 450 455 460
 Asn Gln Leu Leu Leu Glu Arg Gln Ser Leu Ser Glu Glu Val Asp Arg
 465 470 475 480
 Leu Arg Thr Gln Leu Pro Ser Met Pro Gln Ser Asp Cys

485

490

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<210> 556  
<211> 1306  
<212> DNA  
<213> Homo Sapiens
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<400> 556

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<210> 557

<211> 328

<212> PRT

<213> Homo Sapiens

<400> 557

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Met Glu Ser Asn Lys Ile Leu Gln Glu Gln Gln Glu Met Glu Arg Gln
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 20          25          30
Arg Lys Glu Met Glu Gln Ile Val Glu Glu Glu Glu Lys Phe Lys Lys
 35          40          45
Gln Trp Glu Glu Asp Trp Gly Ser Lys Glu Gln Leu Leu Leu Pro Lys
 50          55          60
Thr Ile Thr Ala Glu Val His Pro Val Pro Leu Arg Lys Pro Lys Tyr
 65          70          75          80
Asp Gln Gly Val Glu Pro Glu Leu Glu Pro Ala Asp Asp Leu Asp Gly
 85          90          95
Gly Thr Glu Glu Gln Gly Glu Gln Asp Phe Arg Lys Tyr Glu Glu Gly
100         105         110
Phe Asp Pro Tyr Ser Met Phe Thr Pro Glu Gln Ile Met Gly Lys Asp
115         120         125
Val Arg Leu Leu Arg Ile Lys Lys Glu Gly Ser Leu Asp Leu Ala Leu
130         135         140

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WO 99/04265

Glu Gly Gly Val Asp Ser Pro Ile Gly Lys Val Val Val Ser Ala Val
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 Tyr Glu Arg Gly Ala Ala Glu Arg His Gly Gly Ile Val Lys Gly Asp
 165 170 175
 Glu Ile Met Ala Ile Asn Gly Lys Ile Val Thr Asp Tyr Thr Leu Ala
 180 185 190
 Glu Ala Asp Ala Ala Leu Gln Lys Ala Trp Asn Gln Gly Gly Asp Trp
 195 200 205
 Ile Asp Leu Val Val Ala Val Cys Pro Pro Lys Glu Tyr Asp Asp Glu
 210 215 220
 Leu Thr Phe Leu Leu Lys Ser Lys Arg Gly Asn Gln Ile His Ala Leu
 225 230 235 240
 Gly Asn Ser Glu Leu Arg Pro His Leu Val Asn Thr Lys Pro Arg Thr
 245 250 255
 Ser Leu Glu Arg Gly His Met Thr His Thr Arg Trp His Pro Trp Asp
 260 265 270
 Leu Asn Leu Ser Pro Arg Asn Leu Lys Leu Pro Leu Ala Leu Asn Gln
 275 280 285
 Gly Gln Ile Arg Asn Ser Ser Gly His Phe Phe Glu Gly Gln Cys Gly
 290 295 300
 Gly Lys Gly Ala Ala Ser Arg Leu Gly Glu Asp Leu Lys Asp Pro Asp
 305 310 315 320
 Ser His Ser Phe Pro Leu Ala Gln
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<210> 558
 <211> 2289
 <212> DNA
 <213> Homo Sapiens

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 ttccggcata aggtggattt tctgattgaa aatgatgcag agaaggacta tctctatgtat 180
 gtgctgcgaa tgtaccacca gaccatggac gtggccgtgc tcgtgggaga cctgaagctg 240
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 aagcaccagg tgaatatatga tcagctgacc ccccgccgct ccagaagct gaaggaggtg 360
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 ggctgtgggc ttccatctc ccacccatc aaaggcggc aggccagacag cgtcgggctc 480
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					ttaaaaaaaa	2289

<210> 559
 <211> 481
 <212> PRT
 <213> Homo Sapiens

<400> 559																
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Ile	Glu	Asn	Asp	Ala	Glu	Lys	Asp	Tyr	Leu	Tyr	Asp	Val	Leu	Arg	Met	
						20			25				30			
Tyr	His	Gln	Thr	Met	Asp	Val	Ala	Val	Leu	Val	Gly	Asp	Leu	Lys	Leu	
						35			40			45				
Val	Ile	Asn	Glu	Pro	Ser	Arg	Leu	Pro	Leu	Phe	Asp	Ala	Ile	Arg	Pro	
						50			55			60				
Leu	Ile	Pro	Leu	Lys	His	Gln	Val	Glu	Tyr	Asp	Gln	Leu	Thr	Pro	Arg	
						65			70			75			80	
Arg	Ser	Arg	Lys	Leu	Lys	Glu	Val	Arg	Leu	Asp	Arg	Leu	His	Pro	Glu	
						85			90			95				
Gly	Leu	Gly	Leu	Ser	Val	Arg	Gly	Gly	Leu	Glu	Phe	Gly	Cys	Gly	Leu	
						100			105			110				
Phe	Ile	Ser	His	Leu	Ile	Lys	Gly	Gly	Gln	Ala	Asp	Ser	Val	Gly	Leu	
						115			120			125				
Gln	Val	Gly	Asp	Glu	Ile	Val	Arg	Ile	Asn	Gly	Tyr	Ser	Ile	Ser	Ser	
						130			135			140				
Cys	Thr	His	Glu	Glu	Val	Ile	Asn	Leu	Ile	Arg	Thr	Lys	Lys	Thr	Val	
						145			150			155			160	
Ser	Ile	Lys	Val	Arg	His	Ile	Gly	Leu	Ile	Pro	Val	Lys	Ser	Ser	Pro	
						165			170			175				
Asp	Glu	Pro	Leu	Thr	Trp	Gln	Tyr	Val	Asp	Gln	Phe	Val	Ser	Glu	Ser	
						180			185			190				
Gly	Gly	Val	Arg	Gly	Ser	Leu	Gly	Ser	Pro	Gly	Asn	Arg	Glu	Asn	Lys	
						195			200			205				
Glu	Lys	Lys	Val	Phe	Ile	Ser	Leu	Val	Gly	Ser	Arg	Gly	Leu	Gly	Cys	
						210			215			220				
Ser	Ile	Ser	Ser	Gly	Pro	Ile	Gln	Lys	Pro	Gly	Ile	Phe	Ile	Ser	His	
						225			230			235			240	
Val	Lys	Pro	Gly	Ser	Leu	Ser	Ala	Glu	Val	Gly	Leu	Glu	Ile	Gly	Asp	
						245			250			255				
Gln	Ile	Val	Glu	Val	Asn	Gly	Val	Asp	Phe	Ser	Asn	Leu	Asp	His	Lys	

260	265	270
Glu Ala Val Asn Val Leu Lys Asn Ser Arg Ser	Leu Thr Ile Ser Ile	
275	280	285
Val Ala Ala Ala Gly Arg Glu Leu Phe Met Thr	Asp Arg Glu Arg Leu	
290	295	300
Ala Glu Ala Arg Gln Arg Glu Leu Gln Arg Gln	Glu Leu Leu Met Gln	
305	310	315
Lys Arg Leu Ala Met Glu Ser Asn Lys Ile Leu	Gln Glu Gln Gln Glu	
325	330	335
Met Glu Arg Gln Arg Arg Lys Glu Ile Ala Gln	Lys Ala Ala Glu Glu	
340	345	350
Asn Glu Arg Tyr Arg Lys Glu Met Glu Gln Ile	Val Glu Glu Glu	
355	360	365
Lys Phe Lys Lys Gln Trp Glu Glu Asp Trp Gly	Ser Lys Glu Gln Leu	
370	375	380
Leu Leu Pro Lys Thr Ile Thr Ala Glu Val His	Pro Val Pro Leu Arg	
385	390	395
Lys Pro Lys Tyr Asp Gln Gly Val Glu Pro	Glu Leu Glu Pro Ala Asp	
405	410	415
Asp Leu Asp Gly Gly Thr Glu Glu Gln Gly	Gln Pro Gln Glu Met	
420	425	430
Leu Lys Arg Met Val Val Tyr Gln Asp Ser Ile	Gln Asp Lys Ile Ser	
435	440	445
Gly Asn Met Arg Lys Ala Leu Thr Pro Thr	Leu Cys Ser Pro Gln Ser	
450	455	460
Arg Ser Trp Gly Arg Met Ser Gly Ser Tyr	Ala Ser Arg Arg Arg Asp	
465	470	475
Pro		480

<210> 560

<211> 2409

<212> DNA

<213> Homo Sapiens

<400> 560

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ttaaaaaaaaa 2409

<210> 561
<211> 521
<212> PRT
<213> Homo Sapiens

Glu Lys Lys Val Phe Ile Ser Leu Val Gly Ser Arg Gly Leu Gly Cys
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 225 230 235 240
 Val Lys Pro Gly Ser Leu Ser Ala Glu Val Gly Leu Glu Ile Gly Asp
 245 250 255
 Gln Ile Val Glu Val Asn Gly Val Asp Phe Ser Asn Leu Asp His Lys
 260 265 270
 Glu Ala Val Asn Val Leu Lys Asn Ser Arg Ser Leu Thr Ile Ser Ile
 275 280 285
 Val Ala Ala Ala Gly Arg Glu Leu Phe Met Thr Asp Arg Glu Arg Leu
 290 295 300
 Ala Glu Ala Arg Gln Arg Glu Leu Gln Arg Gln Glu Leu Leu Met Gln
 305 310 315 320
 Lys Arg Leu Ala Met Glu Ser Asn Lys Ile Leu Gln Glu Gln Glu
 325 330 335
 Met Glu Arg Gln Arg Arg Lys Glu Ile Ala Gln Lys Ala Ala Glu Glu
 340 345 350
 Asn Glu Arg Tyr Arg Lys Glu Met Glu Gln Ile Val Glu Glu Glu
 355 360 365
 Lys Phe Lys Lys Gln Trp Glu Glu Asp Trp Gly Ser Lys Glu Gln Leu
 370 375 380
 Leu Leu Pro Lys Thr Ile Thr Ala Glu Val His Pro Val Pro Leu Arg
 385 390 395 400
 Lys Pro Lys Tyr Asp Gln Gly Val Glu Pro Glu Leu Glu Pro Ala Asp
 405 410 415
 Asp Leu Asp Gly Gly Thr Glu Glu Gln Gly Glu Gln Thr Phe Cys Pro
 420 425 430
 Ser Pro Gln Pro Pro Arg Gly Pro Gly Val Ser Thr Ile Ser Lys Pro
 435 440 445
 Val Met Val His Gln Glu Pro Asn Phe Ile Tyr Arg Pro Ala Val Lys
 450 455 460
 Ser Glu Val Leu Pro Gln Glu Met Leu Lys Arg Met Val Val Tyr Gln
 465 470 475 480
 Asp Ser Ile Gln Asp Lys Ile Ser Gly Asn Met Arg Lys Ala Leu Thr
 485 490 495
 Pro Thr Leu Cys Ser Pro Gln Ser Arg Ser Trp Gly Arg Met Ser Gly
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 Ser Tyr Ala Ser Arg Arg Arg Asp Pro
 515 520

<210> 562
 <211> 1445
 <212> DNA
 <213> Homo Sapiens

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ccttaaatat gcagtcttca cccagagtaa agtggatgc gcaagagtcc agtgtcg	720
cctcagccag ttcttggcca ccacaatggg agcagccctg gccgagttgt ctctgtgg	780
tctatgcac cctcttggc gaaattctg cgatcttata gattctaattg agtcttg	840
agacattgtc ataaaagcca gtgattttaa gaaaaagagt gttctggaa tcaatgttt	900
ccagtcacat cccagaacat cagttgtaa ataaatcaa ttgggtgtcc ttgatttcat	960
aagtagaaaca aacactaaat gtgcctctga gatggccacc ccggcaggg acctgtgc	1020
tccggccatg ctcagggctc cctctggctc ccgggtcact cttgtggccc cagtgggtgg	1080
tccctgcagt catggctga gtgcgcaggg gccaccgcgt ggctgctgtc gtcctcc	1140
ggggaccacg gggacaacaag gtcacacett ccgtgctgtg aagctgtcca gatgtgc	1200
tttggctggg gttttgggtg gacgttcaa gtggcattt gtacaatgca ggttagaatt	1260
caggaatttca aagtatgtgc ccgggtntgt caggtcccag ttgccttnt gacggcccc	1320
ctcagaggga cggcgatgag cactaaatgc tttttgant atttcctat agatttttt	1380
taaaacttt tttccctcct gttccaattt atagcttct tatttaataa attctgttagt	1440
tcacc	1445

<210> 563

<211> 192

<212> PRT

<213> Homo Sapiens

<400> 563

Pro Ala Gly Ser Pro Ser Ala Asp Phe Ala Val His Gly Glu Ser Leu			
1	5	10	15
Gly Asp Arg His Leu Arg Thr Leu Gln Ile Ser Tyr Asp Ala Leu Lys			
20	25	30	
Asp Glu Asn Ser Lys Leu Arg Arg Lys Leu Asn Glu Val Gln Ser Phe			
35	40	45	
Ser Glu Ala Gln Thr Glu Met Val Arg Thr Leu Glu Arg Lys Leu Glu			
50	55	60	
Ala Lys Met Ile Lys Glu Glu Ser Asp Tyr His Asp Leu Glu Ser Val			
65	70	75	80
Val Gln Gln Val Glu Gln Asn Leu Glu Leu Met Thr Lys Arg Ala Val			
85	90	95	
Lys Ala Glu Asn His Val Val Lys Leu Lys Gln Glu Ile Ser Leu Leu			
100	105	110	
Gln Ala Gln Val Ser Asn Phe Gln Arg Glu Asn Glu Ala Leu Arg Cys			
115	120	125	
Gly Gln Gly Ala Ser Leu Thr Val Val Lys Gln Asn Ala Asp Val Ala			
130	135	140	
Leu Gln Asn Leu Arg Val Val Met Asn Ser Ala Gln Ala Ser Ile Lys			
145	150	155	160
Gln Leu Val Ser Gly Ala Glu Thr Leu Asn Leu Val Ala Glu Ile Leu			
165	170	175	
Lys Ser Ile Asp Arg Ile Ser Glu Val Lys Asp Glu Glu Asp Ser			
180	185	190	

<210> 564

<211> 1226

<212> DNA

<213> Homo Sapiens

<400> 564

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agagccccgag cgccgcaggag ctcaaggagc agggcaatcg tctgttcgtg ggccgaaagt	180
acccggaggc ggcggcctgc tacggccgcg cgatcacccg gaaccgcgtg gtggccgtgt	240
attacaccaa ccggggccttg tgctacactga agatgcagca gcacgagcag gcccctggccg	300
actgcccggc cgccctggag ctggacgggc agtctgtgaa ggcgcacttc ttccctggggc	360
agtgcgcagct ggagatggag agctatgatg aggccatcgcaaatctgcag cgagcttaca	420
gcctggccaa ggagcagcgg ctgaacttcg gggacgcacat ccccagcgtc cttcgaatcg	480
cgaagaagaa ggcgtgaaac agcattgagg agcggcgcac ccaccaggag agcgagctgc	540
actcctaccc tcaggcgtc attgccgcgg agcgtgagag ggagctggaa gagtgccagc	600
gaaaccacga gggtgatgag gacgacagcc acgtccgggc ccagcaggcc tgcattgagg	660
ccaagcacga caagtacatg gcggacatgg acgagcttt ttctcaggtg gatgagaaga	720
ggaagaagcg agacatcccc gactacctgt gtggcaagat cagcttgag ctgatgcggg	780
agccgtgcat cacgcccagt ggcacatcacct acgaccgcac ggacatcgag gagcacatgc	840
agcgtgtggg tcattttgac ccggtgaccg ggagccccct gaccaggaa cagttcatcc	900
ccaaacttggc tatgaaggag gttattgacg cattcatctc tgagaatggc tgggtggagg	960
actactgagg ttccctgccc tacctggcgt cctggtccag gggagccctg ggcagaagcc	1020
cccgccccct aaacatagtt tatgttttg gccaccccgaa ccgcttcccc caagttctgc	1080
tgttggactc tggactgttt cccctctcag catcgcttt gctggccgt gattgtcccc	1140
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gtgtataaaa atccgtgagc acgaaa	1226

<210> 565

<211> 303

<212> PRT

<213> Homo Sapiens

<400> 565

Met Lys Gly Lys Glu Glu Lys Glu Gly Gly Ala Arg Leu Gly Ala Gly	
1 5 10 15	
Gly Gly Ser Pro Glu Lys Ser Pro Ser Ala Gln Glu Leu Lys Glu Gln	
20 25 30	
Gly Asn Arg Leu Phe Val Gly Arg Lys Tyr Pro Glu Ala Ala Ala Cys	
35 40 45	
Tyr Gly Arg Ala Ile Thr Arg Asn Pro Leu Val Ala Val Tyr Tyr Thr	
50 55 60	
Asn Arg Ala Leu Cys Tyr Leu Lys Met Gln Gln His Glu Gln Ala Leu	
65 70 75 80	
Ala Asp Cys Arg Arg Ala Leu Glu Leu Asp Gly Gln Ser Val Lys Ala	
85 90 95	
His Phe Phe Leu Gly Gln Cys Gln Leu Glu Met Glu Ser Tyr Asp Glu	
100 105 110	
Ala Ile Ala Asn Leu Gln Arg Ala Tyr Ser Leu Ala Lys Glu Gln Arg	
115 120 125	
Leu Asn Phe Gly Asp Asp Ile Pro Ser Ala Leu Arg Ile Ala Lys Lys	
130 135 140	
Lys Arg Trp Asn Ser Ile Glu Glu Arg Arg Ile His Gln Glu Ser Glu	
145 150 155 160	
Leu His Ser Tyr Leu Ser Arg Leu Ile Ala Ala Glu Arg Glu Arg Glu	
165 170 175	
Leu Glu Glu Cys Gln Arg Asn His Glu Gly Asp Glu Asp Asp Ser His	
180 185 190	
Val Arg Ala Gln Gln Ala Cys Ile Glu Ala Lys His Asp Lys Tyr Met	
195 200 205	
Ala Asp Met Asp Glu Leu Phe Ser Gln Val Asp Glu Lys Arg Lys Lys	

210	215	220
Arg Asp Ile Pro Asp Tyr Leu Cys Gly Lys Ile Ser Phe Glu Leu Met		
225	230	235
Arg Glu Pro Cys Ile Thr Pro Ser Gly Ile Thr Tyr Asp Arg Lys Asp		240
245	250	255
Ile Glu Glu His Leu Gln Arg Val Gly His Phe Asp Pro Val Thr Gly		
260	265	270
Ser Pro Leu Thr Gln Glu Gln Phe Ile Pro Asn Leu Ala Met Lys Glu		
275	280	285
Val Ile Asp Ala Phe Ile Ser Glu Asn Gly Trp Val Glu Asp Tyr		
290	295	300

<210> 566
<211> 1857
<212> DNA
<213> Homo Sapiens

<400> 566

gtgaggggct ccttggca gggtagtgt ttgggtgtccc tgcgtttgcgt gatattgaca	60
aactgaagct ttcctgcacc actggactta aggaanagt tactcgttagg cggacagctt	120
tagtggccgg ccggccgctc tcataccccg taaggagcag agtcctttgt actgaccaag	180
atgagcaaca tctacatcca ggagccccc acgaatggga aggttttatt gaaaactaca	240
gctggagata ttgacataga gttgtggtcc aaagaagctc ctaaagctt cagaaatttt	300
atcccaacctt tgtttggaaag cttattatga caataaccatt tttcatagag ttgtgcctgg	360
tttcatagtc caaggcgag atcctactgg cacagggagt ggtggagagt ctatctatgg	420
agcgccattc aaagatgaat ttcattcacg gttgcgtttt aatcgagag gactgggtgc	480
catggcaaat gctggttctc atgataatgg caccacttt ttcttcacac tgggtcgagc	540
agatgaacctt aacaataaagc ataccatctt tggaaaggtt acagggata cagtatataa	600
catgttgcga ctgtcagaag tagacattga tgatgacgaa agaccacata atccacacaa	660
aataaaaagc tggaggttt tggtaatcc ttttgatgac atcattccaa gggaaattaa	720
aaggctgaaa aaagagaaaac cagaggagga agtaaagaaa ttgaaaccca aaggcacaaa	780
aaatttttagt ttactttcat ttggagagga agctgagggaa gaagaagagg aagtaatcg	840
agtttagtcag agcatgaagg gcaaaagcaa aagtagtcat gacttgccta aggatgatcc	900
acatctcagt tctgttccag ttgtagaaag tgaaaaaggt gatgcaccag atttagttga	960
tgtatggagaa gatgaaaagt cagagcatga tgaatatatt gatgtgtatg aaaagaacct	1020
gatgagagaa agaattgcca aaaaattaaa aaaggacaca agtgcgaatg taaaatcagc	1080
tggagaagga gaagtggaga agaaatcagt cagccgcagt gaagagctca gaaaagaagc	1140
aagacaatta aaacgggaac tcttagcagc aaaacaaaaa aaagtagaaa atgcagcaaa	1200
acaaggcagaa aaaagaagtg aagaggaaga agccctcca gatgggtctg ttgccgata	1260
cagaagagaa aagcaaaagt atgaagctt gaggaagcaa cagtc当地 aagggacttc	1320
ccggaaagat cagacccttg cactgctgaa ccagttaaa tctaaactca ctcaagcaat	1380
tgctgaaaca cctgaaaatg acattcctga aacagaagta gaagatgatg aaggatggat	1440
gtcacatgta cttcagttt aggataaaag cagaaaagtg aaagatgcaa gcatgcaaga	1500
ctcagatatac tttgaaatct atgatcctcg gaatccagtg aataaaagaa ggagggaga	1560
aagcaaaaag ctgatgagag agaaaaaaga aagaagataa aatgagaata atgataacca	1620
gaacttgctg gaaatgtgcc tacaatggcc ttgtAACAGC cattgttccc aacagcatca	1680
tttaggggtg tgaaaagaag tattttgaa cctgtgtct ggtttgaaa aacaattatc	1740
ttgttttgcg aattgtggaa tgatgtaaagc aaatgcttt ggttactggt acatgtgttt	1800
ttccctagct gacctttat attgctaaat ctgaaaataaa ataacttcc ttccaaa	1857

<210> 567
<211> 372
<212> PRT
<213> Homo Sapiens

<400> 567

Met Ala Asn Ala Gly Ser His Asp Asn Gly Thr His Phe Phe Phe Thr
 1 5 10 15

Leu Gly Arg Ala Asp Glu Leu Asn Asn Lys His Thr Ile Phe Gly Lys
 20 25 30

Val Thr Gly Asp Thr Val Tyr Asn Met Leu Arg Leu Ser Glu Val Asp
 35 40 45

Ile Asp Asp Asp Glu Arg Pro His Asn Pro His Lys Ile Lys Ser Cys
 50 55 60

Glu Val Leu Phe Asn Pro Phe Asp Asp Ile Ile Pro Arg Glu Ile Lys
 65 70 75 80

Arg Leu Lys Lys Glu Lys Pro Glu Glu Glu Val Lys Lys Leu Lys Pro
 85 90 95

Lys Gly Thr Lys Asn Phe Ser Leu Leu Ser Phe Gly Glu Ala Glu
 100 105 110

Glu Glu Glu Glu Val Asn Arg Val Ser Gln Ser Met Lys Gly Lys
 115 120 125

Ser Lys Ser Ser His Asp Leu Leu Lys Asp Asp Pro His Leu Ser Ser
 130 135 140

Val Pro Val Val Glu Ser Glu Lys Gly Asp Ala Pro Asp Leu Val Asp
 145 150 155 160

Asp Gly Glu Asp Glu Ser Ala Glu His Asp Glu Tyr Ile Asp Gly Asp
 165 170 175

Glu Lys Asn Leu Met Arg Glu Arg Ile Ala Lys Lys Leu Lys Lys Asp
 180 185 190

Thr Ser Ala Asn Val Lys Ser Ala Gly Glu Gly Glu Val Glu Lys Lys
 195 200 205

Ser Val Ser Arg Ser Glu Glu Leu Arg Lys Glu Ala Arg Gln Leu Lys
 210 215 220

Arg Glu Leu Leu Ala Ala Lys Gln Lys Lys Val Glu Asn Ala Ala Lys
 225 230 235 240

Gln Ala Glu Lys Arg Ser Glu Glu Glu Ala Pro Pro Asp Gly Ala
 245 250 255

Val Ala Glu Tyr Arg Arg Glu Lys Gln Lys Tyr Glu Ala Leu Arg Lys
 260 265 270

Gln Gln Ser Lys Lys Gly Thr Ser Arg Glu Asp Gln Thr Leu Ala Leu
 275 280 285

Leu Asn Gln Phe Lys Ser Lys Leu Thr Gln Ala Ile Ala Glu Thr Pro
 290 295 300

Glu Asn Asp Ile Pro Glu Thr Glu Val Glu Asp Asp Glu Gly Trp Met
 305 310 315 320

Ser His Val Leu Gln Phe Glu Asp Lys Ser Arg Lys Val Lys Asp Ala
 325 330 335

Ser Met Gln Asp Ser Asp Thr Phe Glu Ile Tyr Asp Pro Arg Asn Pro
 340 345 350

Val Asn Lys Arg Arg Arg Glu Glu Ser Lys Lys Leu Met Arg Glu Lys
 355 360 365

Lys Glu Arg Arg
 370

<210> 568
 <211> 1537
 <212> DNA
 <213> Homo Sapiens

<400> 568

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caccaaccag	atccgcctaa	ccaatgtggc	cgtggtaacgg	atgaagcgtg	ccgggaagcg	180
cttcgaaatc	gcctgctaca	aaaacaaggt	cgtcggtctgg	cggagcggcg	tggaaaaaga	240
cctcgatgaa	gttctgcaga	cccactcagt	gtttgtaaat	gttctaaag	gtcaggttgc	300
caaaaaaggaa	gatctcatca	gtgcgtttgg	aacagatgac	caaactgaaa	tctgtaagca	360
gattttgact	aaaggagaag	ttcaagtatc	agataaaagaa	agacacacac	aactggagca	420
gatgttttagg	gacattgcaa	ctattgtggc	agacaaatgt	gtgaatcctg	aaacaaaagag	480
accatacacc	gtgatcctta	ttgagagagc	catgaaggac	atccactatt	cggtgaaaac	540
caacaagagt	acaaaacagc	aggctttgga	agtataaag	cagttaaaag	agaaaaatgaa	600
gatagaacgt	gctcacatga	agcttcgggt	catccttcca	gtcaatgaag	gcaagaactg	660
aaagaaaaagc	tcaagccact	gatcaaggc	atagaaagtg	aagattatgg	ccaacagtt	720
gaaatcgtat	gtctgattga	cccggtcgc	ttccgagaaa	ttgatgagct	aataaaaaaag	780
gaaactaaag	gcaaaaggttc	tttggaaagta	ctcaatctga	aagatgtaga	agaaggagat	840
gagaaatttg	aatgacaccc	atcaatctct	tcacctctaa	aacactaaag	tgtttccgtt	900
tccgacggca	ctgtttcatg	tctgtggct	gccaaatact	tgcttaact	atttgacatt	960
ttctatcttt	gtgtttaacag	ttggacacagc	aaggcttcc	tacataagta	taataatgtg	1020
ggaatgattt	ggttttaatt	ataaaactggg	gtctaaatcc	taaagcaaaa	ttgaaactcc	1080
aagatgcaaa	gtccagagtg	gcattttgct	actctgtctc	atgccttgat	agctttccaa	1140
aatgaaagtt	acttgangca	gctcttgtgg	gtaaaaagtt	atttgtacag	tagagtaaga	1200
ttatttagggg	tatgtctata	caacaaaagg	gggggtcttt	cctaaaaaaag	aaaacatatg	1260
atgcttcatt	tctacttaat	ggaacttgtg	ttctgaggggt	cattatggta	tcgtaatgt	1320
aagcttggat	gatgttcctg	attatttgag	gaacagatat	agaaaaattg	tgccggaatt	1380
acctttcatt	gaacatgctg	ccataaaatta	ggttattttt	ggtaaaaaaa	taaaagtcaa	1440
ttatTTTaa	tttttaagt	ttataatata	tattaatata	ggtaaaaattg	tatgtaatca	1500
ataaaaaccaa	tttatgttt	attaaactta	aaaaaaaa			1537

<210> 569

<211> 210

<212> PRT

<213> Homo Sapiens

<400> 569

Ala	Ala	Arg	Arg	Ser	Val	Val	Thr	Ala	Arg	Arg	Trp	Trp	Pro	Ser	Gly	
1					5				10					15		
Trp	Thr	Ala	Arg	Val	Ser	Pro	Gly	Ser	Pro	Ala	Ser	Gly	Ser	Leu	Asn	
						20			25					30		
Ser	Arg	Asp	Val	Asp	Leu	His	Pro	His	Gln	Pro	Asp	Pro	Pro	Asn	Gln	
						35			40					45		
Cys	Gly	Arg	Gly	Thr	Asp	Glu	Ala	Cys	Arg	Glu	Ala	Ley	Arg	Asn	Arg	
						50			55					60		
Leu	Leu	Gln	Lys	Gln	Val	Val	Gly	Trp	Arg	Ser	Gly	Val	Glu	Lys	Asp	
						65			70					75		80
Leu	Asp	Glu	Val	Leu	Gln	Thr	His	Ser	Val	Phe	Val	Asn	Val	Ser	Lys	
						85			90					95		
Gly	Gln	Val	Ala	Lys	Lys	Glu	Asp	Leu	Ile	Ser	Ala	Phe	Gly	Thr	Asp	
						100			105					110		
Asp	Gln	Thr	Glu	Ile	Cys	Lys	Gln	Ile	Leu	Thr	Lys	Gly	Glu	Val	Gln	
						115			120					125		
Val	Ser	Asp	Lys	Glu	Arg	His	Thr	Gln	Leu	Glu	Gln	Met	Phe	Arg	Asp	
						130			135					140		
Ile	Ala	Thr	Ile	Val	Ala	Asp	Lys	Cys	Val	Asn	Pro	Glu	Thr	Lys	Arg	
						145			150					155		160
Pro	Tyr	Thr	Val	Ile	Leu	Ile	Glu	Arg	Ala	Met	Lys	Asp	Ile	His	Tyr	

165	170	175
Ser Val Lys Thr Asn Lys Ser Thr Lys Gln Gln Ala Leu Glu Val Ile		
180	185	190
Lys Gin Leu Lys Glu Lys Met Lys Ile Glu Arg Ala His Met Lys Leu		
195	200	205
Arg Phe		
210		

<210> 570
<211> 1211
<212> DNA
<213> Homo Sapiens

<400> 570 accatcttg gaaaggttac aggggtatac agtatataac atgttgcgac tgcagaagt agacattgtat gatgacgaaa gaccacataa tccacacaaa ataaaaagct gtgagggttt gtttaatcct tttgtatgaca tcattccaag ggaaattaaa aggctgaaaa aagagaaaacc agaggagggaa gtaaagaaat tgaaacccaa aggacacaaa aatttttagtt tactttcatt tggagagggaa gctgaggaag aagaggagga agtaaatcga gttagtcaga gcatgaaggg caaaagcaa agtagtcatg acttgcttaa ggatgatcca catctcagtt ctgttccagt tgtagaaaat gaaaaagggtg atgcagcaga ttttagttgat gatggagaag atgaaaagtgc agagcatgat gaatatattt atgggtatgaa aaaaacccctg atgagagaaa gaattgc当地 aaaattaaaa aaggacacaa gtgcgaatgt taaatcagct ggagaaggag aagtggagaa gaaatcagtc agcccgagt aagagctcag aaaagaagca agacaattaa aacgggaaact cttagcagca gaacaaaaaa aagtagaaaaa tgccggccaa caagcagaaa aaagaagtga agagggaaa gcccctccag atgggtctgt tgccgaatac agaagagaaa agaaaaagta tgaagctctg aggaagcaac agtcaaagaa gggacttcc cgggaagatc agacccttgc actgctgaac cagtttaat ctaaactcac tcaagcaatt gctgaaacgc ctgaaaatga cattcctgaa acagaagtag aagatgatgaa agatggatg tcacatgtac ttcatgttga ggataaaaagc agaaaaagtga aagatgcaag catgcaagac tcagatacat ttgaaatcta tgatcctcgg aatccagtga ataaaaagaag gggggaaa agaaaaagc tgatgagaga gaaaaaagaa agaagataaa atgagaataa tgataaccag aacttgctgg aaatgtgcct acaatggcct tgtaacagcc attgttccca acagcatcac tttaggggtgt gaaaagaagt atttttgaac ctgttgcgt gttttgaaaa acaattatct tgtttgcaa attgtgaaat gatgtaa a	60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 1080 1140 1200 1211
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<210> 571
<211> 354
<212> PRT
<213> Homo Sapiens

<400> 571 Pro Ser Leu Glu Arg Leu Gln Gly Tyr Thr Val Tyr Asn Met Leu Arg 1 5 10 15 Leu Ser Glu Val Asp Ile Asp Asp Asp Glu Arg Pro His Asn Pro His 20 25 30 Lys Ile Lys Ser Cys Glu Val Leu Phe Asn Pro Phe Asp Asp Ile Ile 35 40 45 Pro Arg Glu Ile Lys Arg Leu Lys Lys Pro Glu Glu Glu Val 50 55 60 Lys Lys Leu Lys Pro Lys Gly Thr Lys Asn Phe Ser Leu Leu Ser Phe 65 70 75 80 Gly Glu Glu Ala Glu Glu Glu Glu Val Asn Arg Val Ser Gln 85 90 95 Ser Met Lys Gly Lys Ser Lys Ser Ser His Asp Leu Leu Lys Asp Asp	
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100	105	110
Pro His Leu Ser Ser Val Pro Val Val Glu Ser Glu Lys Gly Asp Ala		
115	120	125
Ala Asp Leu Val Asp Asp Gly Glu Asp Glu Ser Ala Glu His Asp Glu		
130	135	140
Tyr Ile Asp Gly Asp Glu Lys Asn Leu Met Arg Glu Arg Ile Ala Lys		
145	150	155
Lys Leu Lys Lys Asp Thr Ser Ala Asn Val Lys Ser Ala Gly Glu Gly		
165	170	175
Glu Val Glu Lys Lys Ser Val Ser Arg Ser Glu Glu Leu Arg Lys Glu		
180	185	190
Ala Arg Gln Leu Lys Arg Glu Leu Leu Ala Ala Glu Gln Lys Lys Val		
195	200	205
Glu Asn Ala Ala Lys Gln Ala Glu Lys Arg Ser Glu Glu Glu Ala		
210	215	220
Pro Pro Asp Gly Ala Val Ala Glu Tyr Arg Arg Glu Lys Gln Lys Tyr		
225	230	235
Glu Ala Leu Arg Lys Gln Gln Ser Lys Lys Gly Thr Ser Arg Glu Asp		
245	250	255
Gln Thr Leu Ala Leu Leu Asn Gln Phe Lys Ser Lys Leu Thr Gln Ala		
260	265	270
Ile Ala Glu Thr Pro Glu Asn Asp Ile Pro Glu Thr Glu Val Glu Asp		
275	280	285
Asp Glu Gly Trp Met Ser His Val Leu Gln Phe Glu Asp Lys Ser Arg		
290	295	300
Lys Val Lys Asp Ala Ser Met Gln Asp Ser Asp Thr Phe Glu Ile Tyr		
305	310	315
Asp Pro Arg Asn Pro Val Asn Lys Arg Arg Arg Glu Glu Ser Lys Lys		
325	330	335
Leu Met Arg Glu Lys Lys Glu Arg Arg Ile Leu Pro Val Asn Glu Gly		
340	345	350
Lys Asn		

<210> 572
 <211> 604
 <212> DNA
 <213> Homo Sapiens

<400> 572
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 tcccttttagc aacagggccc ccaagaagct cccgttcatt cacccttacc ttggccccca 120
 ggttggaccc ccaaaggctc ccttacccca aagtgggtgg ttgaataaat ctttcagtt 180
 ccctggctcc caaggccat tgaagaagat tgtacaaggc gtgcctcaag taccggcagt 240
 ggaaacagaa gcacctgcct cacttcaagc cgtggctgca cccggagcag agcccgttgc 300
 cgagcctggc gctgtcggag ctgtcggtgc agcatgcgga ctcactggag aacatcgacg 360
 agagcgcggg gggcggagagc agagaggagc gatggggcgg cgccggcggc gagggcagcg 420
 acgacgacac cttcacctga gccccacccg cttcaggagc ggagacagga ccggggcagc 480
 cctggggcgg cggccgctcc tgcactttct cccctcccc accccggcacc tggtgccacc 540
 gggccaggcc caggcgggtg ctgcagcctg gctggacaga gcccaataaa cggatcccac 600
 agcc 604

<210> 573
 <211> 195
 <212> PRT

<213> Homo Sapiens

<400> 573

Leu	Arg	Gln	Lys	Ile	Leu	Val	Pro	Thr	Phe	Cys	Ser	Ile	Pro	Lys	Gly
1				5					10				15		
Leu	Thr	Phe	Ile	Pro	Phe	Ser	Asn	Arg	Ala	Pro	Lys	Lys	Leu	Pro	Phe
		20				25						30			
Ile	His	Pro	Tyr	Leu	Gly	Pro	Gln	Val	Gly	Pro	Pro	Lys	Ala	Pro	Leu
	35					40				45					
Pro	Gln	Ser	Gly	Trp	Leu	Asn	Lys	Ser	Ser	Gln	Phe	Pro	Gly	Ser	Gln
	50					55				60					
Gly	Pro	Leu	Lys	Lys	Ile	Val	Gln	Gly	Val	Pro	Gln	Val	Pro	Arg	Val
65					70				75				80		
Glu	Thr	Glu	Ala	Pro	Ala	Ser	Leu	Gln	Ala	Val	Ala	Ala	Pro	Gly	Ala
	85						90				95				
Glu	Pro	Val	Ala	Glu	Pro	Gly	Ala	Val	Gly	Ala	Val	Gly	Ala	Ala	Cys
	100					105				110					
Gly	Leu	Thr	Gly	Glu	His	Arg	Arg	Glu	Arg	Gly	Gly	Arg	Glu	Gln	Arg
	115					120				125					
Gly	Ala	Asp	Gly	Arg	Arg	Gly	Arg	Arg	Gly	Gln	Arg	Arg	Arg	His	Leu
	130					135				140					
His	Leu	Ser	Pro	His	Arg	Phe	Arg	Asp	Gly	Asp	Arg	Thr	Gly	Arg	Ala
145					150				155			160			
Leu	Gly	Arg	Arg	Pro	Leu	Leu	His	Phe	Leu	Pro	Ser	Pro	Thr	Arg	His
	165					170				175					
Leu	Val	Ala	Pro	Gly	Gln	Ala	Gln	Ala	Gly	Ala	Ala	Ala	Trp	Leu	Asp
	180					185				190					
Arg	Ala	Gln													
	195														

<210> 574

<211> 742

<212> DNA

<213> Homo Sapiens

<400> 574

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ggctgccggc	aatggggggg	cctggccccc	gcccctgtga	ggaccccgcg	gtgtctgggg	180
gagcaggtgc	agggggctcc	gagcccttgg	tgactgtcac	cgtgcagtgc	gccttcacag	240
tggccctgag	ggcaggaaga	ggagccgacc	tgtccagcct	gcgggactg	ctgggccaag	300
ctttccttca	ccaggcccag	cttggcaat	tcagttacct	agccccaggt	gaggacgggc	360
actgggtccc	catccccgag	gaggagtgc	tgcagagggc	ctggcaggac	gcagctgcct	420
gccccagggg	gctgcagctg	cagtgcaggg	gagccggggg	tcggccggtc	ctttaccagg	480
tggtggccca	gcacagatac	tccgcccagg	ggccagagga	cctgggcttc	cgacaggggg	540
acacgggtga	cgtcctgtgt	gaagtggacc	aggcatggct	ggagggccac	tgtgacggcc	600
gcatcgccat	cttccccaa	tgcttcgtgg	tccccggccgg	ccctcgatg	tcaggagccc	660
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<210> 575

<211> 232

<212> PRT

<213> Homo Sapiens

<400> 575

His Gln Gly Pro Leu Asp Ala Glu Thr Glu Val Gly Ala Asp Arg Cys
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 Thr Ser Thr Ala Tyr Gln Glu Gln Arg Pro Gln Val Glu Gln Val Gly
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 Lys Val Ala Pro Leu Ser Pro Gly Leu Pro Ala Met Gly Gly Pro Gly
 35 40 45
 Pro Gly Pro Cys Glu Asp Pro Ala Gly Ala Gly Ala Gly Ala Gly
 50 55 60
 Gly Ser Glu Pro Leu Val Thr Val Thr Val Gln Cys Ala Phe Thr Val
 65 70 75 80
 Ala Leu Arg Ala Gly Arg Gly Ala Asp Leu Ser Ser Leu Arg Ala Leu
 85 90 95
 Leu Gly Gln Ala Phe Leu His Gln Ala Gln Leu Gly Gln Phe Ser Tyr
 100 105 110
 Leu Ala Pro Gly Glu Asp Gly His Trp Val Pro Ile Pro Glu Glu Glu
 115 120 125
 Ser Leu Gln Arg Ala Trp Gln Asp Ala Ala Ala Cys Pro Arg Gly Leu
 130 135 140
 Gln Leu Gln Cys Arg Gly Ala Gly Gly Arg Pro Val Leu Tyr Gln Val
 145 150 155 160
 Val Ala Gln His Arg Tyr Ser Ala Gln Gly Pro Glu Asp Leu Gly Phe
 165 170 175
 Arg Gln Gly Asp Thr Val Asp Val Leu Cys Glu Val Asp Gln Ala Trp
 180 185 190
 Leu Glu Gly His Cys Asp Gly Arg Ile Gly Ile Phe Pro Lys Cys Phe
 195 200 205
 Val Val Pro Ala Gly Pro Arg Met Ser Gly Ala Pro Gly Arg Leu Pro
 210 215 220
 Arg Ser Gln Gln Gly Asp Gln Pro
 225 230

<210> 576

<211> 1087

<212> DNA

<213> Homo Sapiens

<400> 576

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caacgaatga	atgaacagcc	acgtcagctt	ttctgggaga	agaggctaca	aggacttagt	240
gcatcagatg	taacagaaca	aattataaaa	accatggAAC	tacccaaagg	tcttcaagga	300
gttggtccag	gtagcaatga	tgagaccctt	ttatctgctg	ttgccagtgc	tttgcacaca	360
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cttaaacat	ctcaacccct	ctgcaaagct	tttattgtca	cagatgaaga	catcaggaaa	480
caggaagagc	gagtacagca	agtacgcaag	aaattggaa	aagcactgtat	ggcagacatc	540
ttgtcgccgag	ctgctgatac	agaagagatg	gatattgaaa	tggacagtgg	agatgaagcc	600
taagaatatg	atcaggtaac	tttcgaccga	ctttccccaa	gagaaaattc	ctagaaattg	660
aacaaaaatg	tttccactgg	ctttgcctg	taagaaaaaa	aatgtacccg	agcacataga	720
gcttttaat	agcactaacc	aatgccttt	tagatgtatt	tttgatgtat	atatctatta	780
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gcaggaccct	aagatgaagc	tgagctttg	atgccaggtg	caatttactg	gaaatgtagc	900
acttacgtaa	aacatttgtt	tcccccacag	tttaatang	aacagatcag	gaattctaaa	960
taaatttccc	agttaaagat	tattgtact	tcactgtata	taaacatatt	tttatacttt	1020

attgaaaggg gacacctgta cattcttcca tcgtcactgt aaagacaaat aaatgattat 1080
attcaca 1087

<210> 577
<211> 200
<212> PRT
<213> Homo Sapiens

<400> 577
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Pro Ile Arg Gln Thr Ala Ser Ile Phe Lys Gln Pro Val Thr Lys Val
35 40 45
Thr Asn His Pro Ser Asn Lys Val Lys Ser Asp Pro Gln Arg Met Asn
50 55 60
Glu Gln Pro Arg Gln Leu Phe Trp Glu Lys Arg Leu Gln Gly Leu Ser
65 70 75 80
Ala Ser Asp Val Thr Glu Gln Ile Ile Lys Thr Met Glu Leu Pro Lys
85 90 95
Gly Leu Gln Gly Val Gly Pro Gly Ser Asn Asp Glu Thr Leu Leu Ser
100 105 110
Ala Val Ala Ser Ala Leu His Thr Ser Ser Ala Pro Ile Thr Gly Gln
115 120 125
Val Ser Ala Ala Val Glu Lys Asn Pro Ala Val Trp Leu Asn Thr Ser
130 135 140
Gln Pro Leu Cys Lys Ala Phe Ile Val Thr Asp Glu Asp Ile Arg Lys
145 150 155 160
Gln Glu Glu Arg Val Gln Gln Val Arg Lys Lys Leu Glu Glu Ala Leu
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Met Ala Asp Ile Leu Ser Arg Ala Ala Asp Thr Glu Glu Met Asp Ile
180 185 190
Glu Met Asp Ser Gly Asp Glu Ala
195 200

<210> 578
<211> 2569
<212> DNA
<213> Homo Sapiens

<400> 578
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tgtttctcat ataaatgacc tttcagactt ttatgttcaa ctaatagaag atgaagctga 180
aattagtcat ct当地cagaga gattaaacag tgaaaaca aggcccgaat attatgtagg 240
tccacctttg caaagaggag atatgatatg tgctgtttc ccagaagata atttatggta 300
tcgtgctgtg atcaaggagc aacaacccaa tgaccttctc tctgtgcagt ttatagatta 360
tggcaatgtt tctgtggttc atactaacaa aataggtagg cttgaccttg ttaatgcaat 420
attgccgggg ttgtgcattt attgctcctt gcagggattt gaggttcctg acaataaaaa 480
ttctaaagaaa atgatgcatt actttccca acggaccgc gaggtcgcaaa taagatgtga 540
atttgttaaa ttcaagaca gatggaaatg tattcttgct gatgaacatg ggatcatagc 600
agatgatatg attagcaggt atgctctcag tggaaaatct caagtagaaac tttctaccca 660
agtaataaa agtgcctggtt caaagtctgt taacaaatca gacattgaca cttcagtatt 720
tcttaactgg tataatccag aaaaaaaaaat gataagagct tatgccactg tgatagatgg 780

acctgagtagc tttgggtgtc agtttgctga tacggagaaa cttcagtgtt tagaagttaga	840
agtacagact gctggagaac aggttagcaga caggagaaaat tgtatcccat gtccttatat	900
tggagatcct tgtatagtaa gatacagaga agatggacat tattataggg cacttacac	960
taatattgt gaagattatc ttgtatctgt caggcttgcg gactttggaa acattgaaga	1020
ctgtgtggac ccaaaagcac tctggccat tccttctgaa cttctgtcg ttcccattgca	1080
agccttcca tggcctct cagggtaa catttcagaa ggattatgtt ctcaagaggg	1140
aatgactat ttctatgaaa taataacaga agatgtgtg gaaataacaa tactagaaat	1200
cagaaggat gtttgtgata tccctttagc aattgtgtac ttgaaaagca aaggtaaaag	1260
tattaatgag aaaatggaga aatattctaa gactggtatt aaaagtgtc ttccctatga	1320
aaatattgac tcagagataa agcagactct tgggtcctac aatcttgatg taggactaa	1380
gaaattaagt aataaagctg tacaaaataa aatatataatg gaacaacaga cagatgagct	1440
tgctgaaata actgaaaaag atgtaaacat tattggaacc aaaccaagta acttccgtga	1500
ccctaaaact gataacattt gtgaagggtt tgaaaacccc tgcaaagata aaattgatac	1560
tgaggaactg gaaggtaat tagagtccca tctgggttgc aaagcagagt ttgatgataa	1620
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cccggtgccca ccgaatgtgc cactctccca agagtgtgtc acaaaaaggcg ccatggagct	1860
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tacagccag ctgcctttag atgacaagat gtatccttgc tctttaggag ttagtcagaa	1980
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tgaccagcgc aggatgtcat tgcatctaca tggagcagat tggatccta aaacacagaa	2100
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ccagatcata tttcagntca attacagaac acctacactn tgaaagcctt tactgttgaa	2280
tctaaatgtg ttgtgtggtc aagtntaaga aacanatggt ctaaatgtga gattttagaa	2340
acagctgaag aaggnacaag ggtttgaac ctttcaatg gtatggagga gatagtgaac	2400
cctgagaatg tctggaatgn nanacccaaa ttggataaga gtccacctga gaaaaggggt	2460
ttggaggtga tggagattt accgtggatn tatactgtg gccaatcagt cagaagctgc	2520
ccntgaacaa gtggcatctt acgcagacca acagagtatt tgagaaaat	2569

<210> 579
 <211> 752
 <212> PRT
 <213> Homo Sapiens

<400> 579																
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Lys	Asp	Leu	Pro	Leu	Lys	Phe	Cys	Glu	Phe	Pro	Gln	Lys	Thr	Ile	Met	
									20				25		30	
Pro	Gly	Phe	Lys	Thr	Thr	Val	Tyr	Val	Ser	His	Ile	Asn	Asp	Leu	Ser	
									35			40		45		
Asp	Phe	Tyr	Val	Gln	Leu	Ile	Glu	Asp	Glu	Ala	Glu	Ile	Ser	His	Leu	
						50			55			60				
Ser	Glu	Arg	Leu	Asn	Ser	Val	Lys	Thr	Arg	Pro	Glu	Tyr	Tyr	Val	Gly	
						65			70			75		80		
Pro	Pro	Leu	Gln	Arg	Gly	Asp	Met	Ile	Cys	Ala	Val	Phe	Pro	Glu	Asp	
						85			90			95				
Asn	Leu	Trp	Tyr	Arg	Ala	Val	Ile	Lys	Glu	Gln	Gln	Pro	Asn	Asp	Leu	
							100			105			110			
Leu	Ser	Val	Gln	Phe	Ile	Asp	Tyr	Gly	Asn	Val	Ser	Val	Val	His	Thr	
							115			120			125			
Asn	Lys	Ile	Gly	Arg	Leu	Asp	Leu	Val	Asn	Ala	Ile	Leu	Pro	Gly	Leu	
							130			135			140			

Cys Ile His Cys Ser Leu Gln Gly Phe Glu Val Pro Asp Asn Lys Asn
 145 150 155 160
 Ser Lys Lys Met Met His Tyr Phe Ser Gln Arg Thr Ser Glu Ala Ala
 165 170 175
 Ile Arg Cys Glu Phe Val Lys Phe Gln Asp Arg Trp Glu Val Ile Leu
 180 185 190
 Ala Asp Glu His Gly Ile Ile Ala Asp Asp Met Ile Ser Arg Tyr Ala
 195 200 205
 Leu Ser Glu Lys Ser Gln Val Glu Leu Ser Thr Gln Val Ile Lys Ser
 210 215 220
 Ala Ser Ser Lys Ser Val Asn Lys Ser Asp Ile Asp Thr Ser Val Phe
 225 230 235 240
 Leu Asn Trp Tyr Asn Pro Glu Lys Lys Met Ile Arg Ala Tyr Ala Thr
 245 250 255
 Val Ile Asp Gly Pro Glu Tyr Phe Trp Cys Gln Phe Ala Asp Thr Glu
 260 265 270
 Lys Leu Gln Cys Leu Glu Val Glu Val Gln Thr Ala Gly Glu Gln Val
 275 280 285
 Ala Asp Arg Arg Asn Cys Ile Pro Cys Pro Tyr Ile Gly Asp Pro Cys
 290 295 300
 Ile Val Arg Tyr Arg Glu Asp Gly His Tyr Tyr Arg Ala Leu Ile Thr
 305 310 315 320
 Asn Ile Cys Glu Asp Tyr Leu Val Ser Val Arg Leu Val Asp Phe Gly
 325 330 335
 Asn Ile Glu Asp Cys Val Asp Pro Lys Ala Leu Trp Ala Ile Pro Ser
 340 345 350
 Glu Leu Leu Ser Val Pro Met Gln Ala Phe Pro Cys Cys Leu Ser Gly
 355 360 365
 Phe Asn Ile Ser Glu Gly Leu Cys Ser Gln Glu Gly Asn Asp Tyr Phe
 370 375 380
 Tyr Glu Ile Ile Thr Glu Asp Val Leu Glu Ile Thr Ile Leu Glu Ile
 385 390 395 400
 Arg Arg Asp Val Cys Asp Ile Pro Leu Ala Ile Val Asp Leu Lys Ser
 405 410 415
 Lys Gly Lys Ser Ile Asn Glu Lys Met Glu Lys Tyr Ser Lys Thr Gly
 420 425 430
 Ile Lys Ser Ala Leu Pro Tyr Glu Asn Ile Asp Ser Glu Ile Lys Gln
 435 440 445
 Thr Leu Gly Ser Tyr Asn Leu Asp Val Gly Leu Lys Lys Leu Ser Asn
 450 455 460
 Lys Ala Val Gln Asn Lys Ile Tyr Met Glu Gln Gln Thr Asp Glu Leu
 465 470 475 480
 Ala Glu Ile Thr Glu Lys Asp Val Asn Ile Ile Gly Thr Lys Pro Ser
 485 490 495
 Asn Phe Arg Asp Pro Lys Thr Asp Asn Ile Cys Glu Gly Phe Glu Asn
 500 505 510
 Pro Cys Lys Asp Lys Ile Asp Thr Glu Glu Leu Glu Gly Glu Leu Glu
 515 520 525
 Cys His Leu Val Asp Lys Ala Glu Phe Asp Asp Lys Tyr Leu Ile Thr
 530 535 540
 Gly Phe Asn Thr Leu Leu Pro His Ala Asn Glu Thr Lys Glu Ile Leu
 545 550 555 560
 Glu Leu Asn Ser Leu Glu Val Pro Leu Ser Pro Asp Asp Glu Ser Lys
 565 570 575
 Glu Phe Leu Glu Leu Glu Ser Ile Glu Leu Gln Asn Ser Leu Val Val

580	585	590
Asp Glu Glu Lys Gly Glu Leu Ser Pro Val Pro Pro Asn Val Pro Leu		
595	600	605
Ser Gln Glu Cys Val Thr Lys Gly Ala Met Glu Leu Phe Thr Leu Gln		
610	615	620
Leu Pro Leu Ser Cys Glu Ala Glu Lys Gln Pro Glu Leu Glu Leu Pro		
625	630	635
Thr Ala Gln Leu Pro Leu Asp Asp Lys Met Asp Pro Leu Ser Leu Gly		
645	650	655
Val Ser Gln Lys Ala Gln Glu Ser Met Cys Thr Glu Asp Met Arg Lys		
660	665	670
Ser Ser Cys Val Glu Ser Phe Asp Asp Gln Arg Arg Met Ser Leu His		
675	680	685
Leu His Gly Ala Asp Cys Asp Pro Lys Thr Gln Asn Glu Met Asn Ile		
690	695	700
Cys Glu Glu Glu Phe Val Glu Tyr Lys Asn Arg Asp Ala Ile Ser Ala		
705	710	715
Leu Met Pro Phe Ser Leu Arg Lys Lys Ala Val Met Glu Ala Ser Thr		
725	730	735
Ile Met Val Tyr Gln Ile Ile Phe Gln Asn Tyr Arg Thr Pro Thr Leu		
740	745	750

<210> 580

<211> 2077

<212> DNA

<213> Homo Sapiens

<400> 580

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gaggtgactc gagcagtgtat gaggataaag aataacatga aactcctgtg gaagtagaaac	180
tcatgactca ggttgcacca gaggatatca ctcttcagag tggcagagat gaactaaatg	240
aggagctcat tcaggaagaa agctctgaag acgaaggaga atatgaagag gttagaaaag	300
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taccattgac ttgtctcacc ttcaacccca aaggtccatc cagaaaattgg cttcaaaaaga	420
ggaatcttct aattcttagt acagtaaattc acagagccgg agacatttgt cagccaagga	480
aagaaggaa ataaaaaaga aaaaacttcc aagtgactca ggagatttag aagcgtagaa	540
gggaaaggat aaagaaaaag aaagtactgt acacattgaa actcatcaga acacaagcaa	600
aaatgttgcg gctgtgcagc caatgaaaacg aggacaaaag agtaaaatga aaaaaatgaa	660
agaaaaatac aaagaccagg atgaagaaga ccgtgaactt atcatgaagt tgctgggtc	720
tgcaggttca aacaaagaag aaaaaggaa gaagggaaag aaaggaaaa caaaggacga	780
acctgtgaag aaacagcccc agaaacctag aggtggacag agggctctg acaacattaa	840
gaaagaaact ccgttccttg aggttataac tcatgagttt caagactttt ctgttagatga	900
tccacatgtt gacaaggaag agcaagatct ggatcaacag ggaaatgagg aaaacatttt	960
tgattctttt acaggccagc cacatcctga agatgtacta ctgtttgccca ttccaatatg	1020
tgccccttac accaccatga caaactacaa atataaagtg aaacttactc ctggagtgca	1080
aaaaaaggaa aaagctgcaa aaacagcctt gaatagttt atgcattcca aagaagacaac	1140
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tggcaaagtg aaaagtgtct gcacccaatc ttctgaacgt aaaaaggaaa tagctgaaat	1260
gaaattctaa aatatttgag aagagccat tttatagcct tttggaagtt caaagatgaa	1320
agcaccatgt atcaggattt ccgcattata aaaaatgaact aaacattgcc ttgcttatatt	1380
caccaaaagg acttaattct tgggttttc ccagttttat atagaggaaa cactgtctat	1440
gataggattt cccaaaggat ttgtggacag ttaaatgcta attatataca tctgttagtta	1500
ttctacatTT tcttggaaatt tggggaggta ataccaagta ttcatatcat gatgtaaaga	1560
aactgaacag tgaagtggct tgattgctta aactattgac ttggtaagtc tactgttat	1620

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tcctaaagta ttgtggaca gttaaatgct aattatatac atctgttagtt attctacatt	1800
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tatatatata ttataggcca gctacaaggg gttaaatat ttaggattgt gtcttgaaaa	1980
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accaaataatgt aaaatataag taataattct catgaaa	2077

<210> 581

<211> 312

<212> PRT

<213> Homo Sapiens

<400> 581

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20	25	30	
Ser Asn Ser Ser Asp Ser Lys Ser Gln Ser Arg Arg His Leu Ser Ala			
35	40	45	
Lys Glu Arg Arg Glu Met Lys Lys Lys Leu Pro Ser Asp Ser Gly			
50	55	60	
Asp Leu Glu Ala Leu Glu Gly Lys Asp Lys Glu Lys Glu Ser Thr Val			
65	70	75	80
His Ile Glu Thr His Gln Asn Thr Ser Lys Asn Val Ala Ala Val Gln			
85	90	95	
Pro Met Lys Arg Gly Gln Lys Ser Lys Met Lys Lys Met Lys Glu Lys			
100	105	110	
Tyr Lys Asp Gln Asp Glu Glu Asp Arg Glu Leu Ile Met Lys Leu Leu			
115	120	125	
Gly Ser Ala Gly Ser Asn Lys Glu Glu Lys Gly Lys Gly Lys Lys			
130	135	140	
Gly Lys Thr Lys Asp Glu Pro Val Lys Lys Gln Pro Gln Lys Pro Arg			
145	150	155	160
Gly Gly Gln Arg Val Ser Asp Asn Ile Lys Lys Glu Thr Pro Phe Leu			
165	170	175	
Glu Val Ile Thr His Glu Leu Gln Asp Phe Ala Val Asp Asp Pro His			
180	185	190	
Asp Asp Lys Glu Glu Gln Asp Leu Asp Gln Gln Gly Asn Glu Glu Asn			
195	200	205	
Leu Phe Asp Ser Leu Thr Gly Gln Pro His Pro Glu Asp Val Leu Leu			
210	215	220	
Phe Ala Ile Pro Ile Cys Ala Pro Tyr Thr Thr Met Thr Asn Tyr Lys			
225	230	235	240
Tyr Lys Val Lys Leu Thr Pro Gly Val Gln Lys Lys Gly Lys Ala Ala			
245	250	255	
Lys Thr Ala Leu Asn Ser Phe Met His Ser Lys Glu Ala Thr Ala Arg			
260	265	270	
Glu Lys Asp Leu Phe Arg Ser Val Lys Asp Thr Asp Leu Ser Arg Asn			
275	280	285	
Ile Pro Gly Lys Val Lys Ser Val Cys Thr Gln Ser Ser Glu Arg Lys			
290	295	300	
Lys Glu Ile Ala Glu Met Lys Phe			
305	310		

<210> 582
 <211> 3309
 <212> DNA
 <213> Homo Sapiens

<400> 582

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gccaatgagt	tcagcgaccg	gtgcaccccg	tcagtcatat	cattggatc	aaaaaataga	180
acaatcgag	ttgcagccaa	aaatcagcaa	atcaactcatg	caaacaatac	ggtgtctaac	240
ttcaaaagat	ttcatggccg	agcatcaat	gacccttca	ttcaaaagga	gaaggaaaac	300
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gaaactgctg	aaaacagcct	caagaaacca	gtAACAGATT	gtgttatttc	agtcccctcc	480
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tgttaagac	ttatgaatga	catgacagct	gttgctttga	attacggaat	ttataaAGCAG	600
gatctccaa	gcctggatga	gaaacACTGG	atagtggTTT	ttgttggat	gggacattca	660
gctttcaag	tgtctgcttG	tgttttaac	aaggggaaaat	tgaaggtaCT	gggaacagct	720
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gaatttaaaa	ctaagtacaa	gttggatgca	aaatccaaaa	tacgagcact	cctacgtctg	840
tatcaggaat	gtgaaaaact	gaaaaagcta	atgagctcta	acagcacaga	ccttccactg	900
aatatcgaat	gctttatgaa	tgataaAGAT	gtttccggaa	agatgaacag	gtcacaattt	960
gaagaactct	gtgctgaact	tctgcaaaAG	atagaagatc	ccctttattc	actgttggaa	1020
caaactcatac	tcaaagtaga	agatgtgagt	gcagttgaga	ttgttggagg	cgctacacga	1080
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ttaaAGTTA	gagaattttc	cgtcacagat	gcagttcctt	ttccaatatac	tctgatctgg	1260
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cctttctcca	aagttctcac	ctttctgaga	agggggcTTT	tttagctaga	agctttctat	1380
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caggaagctg	aagaACGGC	aaaaatgttt	gaagaactag	gacagaggct	gcagcattat	2220
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atngaatcac	ccaaactgga	aagaactcca	aatggccaa	atattgataa	aaaggaagaa	2520
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ggcttctaa aaccatttct gtccaaagaga aaatgacttt ttgccttgat attaaaaatt	3120
caatgagtaa aacaaaagct agtcaaatgt gtagcagca tgcagaacaa aaactttaaa	3180
ctttctctct cactatacag tatattgtca tggaaagtg tggaatggaa gaaatgtcga	3240
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gtcatttct	3309

<210> 583

<211> 872

<212> PRT

<213> Homo Sapiens

<400> 583

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35 40 45	
Thr Pro Ser Val Ile Ser Phe Gly Ser Lys Asn Arg Thr Ile Gly Val	
50 55 60	
Ala Ala Lys Asn Gln Gln Ile Thr His Ala Asn Asn Thr Val Ser Asn	
65 70 75 80	
Phe Lys Arg Phe His Gly Arg Ala Phe Asn Asp Pro Phe Ile Gln Lys	
85 90 95	
Glu Lys Glu Asn Leu Ser Tyr Asp Leu Val Pro Leu Lys Asn Gly Gly	
100 105 110	
Val Gly Ile Lys Val Met Tyr Met Gly Glu Glu His Leu Phe Ser Val	
115 120 125	
Glu Gln Ile Thr Ala Met Leu Leu Thr Lys Leu Lys Glu Thr Ala Glu	
130 135 140	
Asn Ser Leu Lys Lys Pro Val Thr Asp Cys Val Ile Ser Val Pro Ser	
145 150 155 160	
Phe Phe Thr Asp Ala Glu Arg Arg Ser Val Leu Asp Ala Ala Gln Ile	
165 170 175	
Val Gly Leu Asn Cys Leu Arg Leu Met Asn Asp Met Thr Ala Val Ala	
180 185 190	
Leu Asn Tyr Gly Ile Tyr Lys Gln Asp Leu Pro Ser Leu Asp Glu Lys	
195 200 205	
Pro Arg Ile Val Val Phe Val Asp Met Gly His Ser Ala Phe Gln Val	
210 215 220	
Ser Ala Cys Ala Phe Asn Lys Gly Lys Leu Lys Val Leu Gly Thr Ala	
225 230 235 240	
Phe Asp Pro Phe Leu Gly Lys Asn Phe Asp Glu Lys Leu Val Glu	
245 250 255	
His Phe Cys Ala Glu Phe Lys Thr Lys Tyr Lys Leu Asp Ala Lys Ser	
260 265 270	
Lys Ile Arg Ala Leu Leu Arg Leu Tyr Gln Glu Cys Glu Lys Leu Lys	
275 280 285	
Lys Leu Met Ser Ser Asn Ser Thr Asp Leu Pro Leu Asn Ile Glu Cys	
290 295 300	
Phe Met Asn Asp Lys Asp Val Ser Gly Lys Met Asn Arg Ser Gln Phe	
305 310 315 320	
Glu Glu Leu Cys Ala Glu Leu Leu Gln Lys Ile Glu Val Pro Leu Tyr	

325	330	335
Ser Leu Leu Glu Gln Thr His Leu Lys Val Glu Asp Val Ser Ala Val		
340	345	350
Glu Ile Val Gly Gly Ala Thr Arg Ile Pro Ala Val Lys Glu Arg Ile		
355	360	365
Ala Lys Phe Phe Gly Lys Asp Ile Ser Thr Thr Leu Asn Ala Asp Glu		
370	375	380
Ala Val Ala Arg Gly Cys Ala Leu Gln Cys Ala Ile Leu Ser Pro Ala		
385	390	395
Phe Lys Val Arg Glu Phe Ser Val Thr Asp Ala Val Pro Phe Pro Ile		
405	410	415
Ser Leu Ile Trp Asn His Asp Ser Glu Asp Thr Glu Gly Val His Glu		
420	425	430
Val Phe Ser Arg Asn His Ala Ala Pro Phe Ser Lys Val Leu Thr Phe		
435	440	445
Leu Arg Arg Gly Pro Phe Glu Leu Glu Ala Phe Tyr Ser Asp Pro Gln		
450	455	460
Gly Val Pro Tyr Pro Glu Ala Lys Ile Gly Arg Phe Val Val Gln Asn		
465	470	475
Val Ser Ala Gln Lys Asp Gly Glu Lys Ser Arg Val Lys Val Lys Val		
485	490	495
Arg Val Asn Thr His Gly Ile Phe Thr Ile Ser Thr Ala Ser Met Val		
500	505	510
Glu Lys Val Pro Thr Glu Glu Asn Glu Met Ser Ser Glu Ala Asp Met		
515	520	525
Glu Cys Leu Asn Gln Arg Pro Pro Glu Asn Pro Asp Thr Asp Lys Asn		
530	535	540
Val Gln Gln Asp Asn Ser Glu Ala Gly Thr Gln Pro Gln Val Gln Thr		
545	550	555
Asp Ala Gln Gln Thr Ser Gln Ser Pro Pro Ser Pro Glu Leu Thr Ser		
565	570	575
Glu Glu Asn Lys Ile Pro Asp Ala Asp Lys Ala Asn Glu Lys Lys Val		
580	585	590
Asp Gln Pro Pro Glu Ala Lys Lys Pro Lys Ile Lys Val Val Asn Val		
595	600	605
Glu Leu Pro Ile Glu Ala Asn Leu Val Trp Gln Leu Gly Lys Asp Leu		
610	615	620
Leu Asn Met Tyr Ile Glu Thr Glu Gly Lys Met Ile Met Gln Asp Lys		
625	630	635
Leu Glu Lys Glu Arg Asn Asp Ala Lys Asn Ala Val Glu Glu Tyr Val		
645	650	655
Tyr Glu Phe Arg Asp Lys Leu Cys Gly Pro Tyr Glu Lys Phe Ile Cys		
660	665	670
Glu Gln Asp His Gln Asn Phe Leu Arg Leu Leu Thr Glu Thr Glu Asp		
675	680	685
Trp Leu Tyr Glu Glu Gly Glu Asp Gln Ala Lys Gln Ala Tyr Val Asp		
690	695	700
Lys Leu Glu Glu Leu Met Lys Ile Gly Thr Pro Val Lys Val Arg Phe		
705	710	715
Gln Glu Ala Glu Glu Arg Pro Lys Met Phe Glu Glu Leu Gly Gln Arg		
725	730	735
Leu Gln His Tyr Ala Lys Ile Ala Ala Asp Phe Arg Asn Lys Asp Glu		
740	745	750
Lys Tyr Asn His Ile Asp Glu Ser Glu Met Lys Lys Val Glu Lys Ser		
755	760	765

Val Asn Glu Val Met Glu Trp Met Asn Asn Val Met Asn Ala Gln Ala
 770 775 780
 Lys Lys Ser Leu Asp Gln Asp Pro Val Val Arg Ala Gln Glu Ile Lys
 785 790 795 800
 Thr Lys Ile Lys Glu Leu Asn Asn Thr Cys Glu Pro Val Val Thr Gln
 805 810 815
 Pro Lys Pro Lys Ile Glu Ser Pro Lys Leu Glu Arg Thr Pro Asn Gly
 820 825 830
 Pro Asn Ile Asp Lys Lys Glu Asp Leu Glu Asp Lys Asn Asn Phe
 835 840 845
 Gly Ala Glu Pro Pro His Gln Asn Gly Glu Cys Tyr Pro Asn Glu Lys
 850 855 860
 Asn Ser Val Asn Met Asp Leu Asp
 865 870

<210> 584
 <211> 2918
 <212> DNA
 <213> Homo Sapiens

<400> 584
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 gctccctgat ggagatggag gggaggagg atgccctta aggtgctgaa gtgcacgtac 180
 tgtggacact ccttgagtc cttgcaggac ctcagcgatcc acatgatcaa aaccaagcat 240
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 aaaaagcgccc cgcttcagga cctggcgccc ccctgctccc ctgagccagc aggaatggcc 360
 gcagagggtgg ccctgagtgaa gtcagccaag gatcagaaaag cagcgaaccc gtacgtcact 420
 cccaaataacc gctatggcta ccagaatggc gccagctaca cctggcagtt tgaggccccgc 480
 aaggcgcaga tcctcaagtg catggagtgt ggcagctccc acgacacgct gcagcagctc 540
 accggccaca ttagtggcac cgggcaacttc ctgaaagtga ccacctcgcc ttctaagaag 600
 ggcaaggcagt tgggtgtggaa ccctgtggtg gaagagaaga tccagtcatt cccactaccg 660
 cccaccaccc acacgcggct gccggccctcc agcatcaaaa agcagccgc ctctcccg 720
 gggtccacga cttctgaaga aaagaaaagag ccagagaagg agaagccgc tgggtgtggc 780
 gacgcggaga agatcaagga ggagagttag gacagcttgg agaaaatttga gcccagcacc 840
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 tggaaacccgc agcaccttc catccgtcag gcccagttcg cctcgagctt gccccggagacc 1980
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<210> 585

<211> 687

<212> PRT

<213> Homo Sapiens

<400> 585

Met	Ala	Ala	Glu	Val	Ala	Leu	Ser	Glu	Ser	Ala	Lys	Asp	Gln	Lys	Ala
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Ala	Asn	Pro	Tyr	Val	Thr	Pro	Asn	Asn	Arg	Tyr	Gly	Tyr	Gln	Asn	Gly
			20					25				30			
Ala	Ser	Tyr	Thr	Trp	Gln	Phe	Glu	Ala	Arg	Lys	Ala	Gln	Ile	Leu	Lys
					35			40				45			
Cys	Met	Cys	Gly	Ser	Ser	His	Asp	Thr	Leu	Gln	Gln	Leu	Thr	Ala	
					50		55				60				
His	Met	Met	Val	Thr	Gly	His	Phe	Leu	Lys	Val	Thr	Thr	Ser	Ala	Ser
					65		70				75				80
Lys	Lys	Gly	Lys	Gln	Leu	Val	Leu	Asp	Pro	Val	Val	Glu	Glu	Lys	Ile
					85			90						95	
Gln	Ser	Ile	Pro	Leu	Pro	Pro	Thr	Thr	His	Thr	Arg	Leu	Pro	Ala	Ser
					100			105					110		
Ser	Ile	Lys	Lys	Gln	Pro	Asp	Ser	Pro	Ala	Gly	Ser	Thr	Thr	Ser	Glu
					115			120				125			
Glu	Lys	Lys	Glu	Pro	Glu	Lys	Glu	Lys	Pro	Pro	Val	Ala	Gly	Asp	Ala
					130		135				140				
Glu	Lys	Ile	Lys	Glu	Glu	Ser	Glu	Asp	Ser	Leu	Glu	Lys	Phe	Glu	Pro
					145		150				155				160
Ser	Thr	Leu	Tyr	Pro	Tyr	Leu	Arg	Glu	Glu	Asp	Leu	Asp	Asp	Ser	Pro
					165			170					175		
Lys	Gly	Gly	Leu	Asp	Ile	Leu	Lys	Ser	Leu	Glu	Asn	Thr	Val	Ser	Thr
					180			185					190		
Ala	Ile	Ser	Lys	Ala	Gln	Asn	Gly	Ala	Pro	Ser	Trp	Gly	Gly	Tyr	Pro
					195			200				205			
Ser	Ile	His	Ala	Ala	Tyr	Gln	Leu	Pro	Gly	Thr	Val	Lys	Pro	Leu	Pro
					210			215				220			
Ala	Ala	Val	Gln	Ser	Val	Gln	Val	Gln	Pro	Ser	Tyr	Ala	Gly	Gly	Val
					225			230				235			240
Lys	Ser	Leu	Ser	Ser	Ala	Glu	His	Asn	Ala	Leu	Leu	His	Ser	Pro	Gly
					245			250					255		
Ser	Leu	Thr	Pro	Pro	Pro	His	Lys	Ser	Asn	Val	Ser	Ala	Met	Glu	Glu

260	265	270
Leu Val Glu Lys Val Thr Gly Lys Val Asn Ile Lys Lys Glu Glu Arg		
275	280	285
Pro Pro Glu Lys Glu Lys Ser Ser Leu Ala Lys Ala Ala Ser Pro Ile		
290	295	300
Ala Lys Glu Asn Lys Asp Phe Pro Lys Thr Glu Glu Val Ser Gly Lys		
305	310	315
Pro Gln Lys Lys Gly Pro Glu Ala Glu Thr Trp Glu Ala Lys Lys Glu		
325	330	335
Gly Pro Leu Asp Val His Thr Pro Asn Gly Thr Glu Pro Leu Lys Ala		
340	345	350
Lys Val Thr Asn Gly Cys Asn Asn Leu Gly Ile Ile Met Asp His Ser		
355	360	365
Pro Glu Pro Ser Phe Ile Asn Pro Leu Ser Ala Leu Gln Ser Ile Met		
370	375	380
Asn Thr His Leu Gly Lys Val Ser Lys Pro Val Ser Pro Ser Leu Asp		
385	390	395
400		
Pro Leu Ala Met Leu Tyr Lys Ile Ser Asn Ser Met Leu Asp Lys Pro		
405	410	415
Val Tyr Pro Ala Thr Pro Val Lys Gln Ala Asp Ala Ile Asp Arg Tyr		
420	425	430
Tyr Tyr Glu Asn Ser Asp Gln Pro Ile Asp Leu Thr Lys Ser Lys Asn		
435	440	445
Lys Pro Leu Val Ser Ser Val Ala Asp Ser Val Ala Ser Pro Leu Arg		
450	455	460
Glu Ser Ala Leu Met Asp Ile Ser Asp Met Val Lys Asn Leu Thr Gly		
465	470	475
480		
Arg Leu Thr Pro Lys Ser Ser Thr Pro Ser Thr Val Ser Glu Lys Ser		
485	490	495
Asp Ala Asp Gly Ser Ser Phe Glu Glu Ala Leu Asp Glu Leu Ser Pro		
500	505	510
Val His Lys Arg Lys Gly Arg Gln Ser Asn Trp Asn Pro Gln His Leu		
515	520	525
Leu Ile Leu Gln Ala Gln Phe Ala Ser Ser Leu Arg Glu Thr Thr Glu		
530	535	540
Gly Lys Tyr Ile Met Ser Asp Leu Gly Pro Gln Glu Arg Val His Ile		
545	550	555
560		
Ser Lys Phe Thr Gly Leu Ser Met Thr Thr Ile Ser His Trp Leu Ala		
565	570	575
Asn Val Lys Tyr Gln Leu Arg Arg Thr Gly Gly Thr Lys Phe Leu Lys		
580	585	590
Asn Leu Asp Thr Gly His Pro Val Phe Phe Cys Asn Asp Cys Ala Ser		
595	600	605
Gln Phe Arg Thr Ala Ser Thr Tyr Ile Ser His Leu Glu Thr His Leu		
610	615	620
Gly Phe Ser Leu Lys Asp Leu Ser Lys Leu Pro Leu Asn Gln Ile Gln		
625	630	635
640		
Glu Gln Gln Asn Val Ser Lys Val Leu Thr Asn Lys Thr Leu Gly Pro		
645	650	655
Leu Gly Ala Thr Glu Glu Asp Leu Gly Ser Thr Phe Gln Cys Lys Leu		
660	665	670
Cys Asn Arg Thr Phe Ala Lys Gln Ala Arg Ser Gln Thr Ala Pro		
675	680	685

<211> 1898
<212> DNA
<213> Homo Sapiens

<400> 586

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tggagtcgga tggggaaaggg ccgccccccca gggtgggctt tgtggacagc accatcaaga	180
gcctggacga naagctgcgg actctgctct accaggagca cgtccccacc tcctcagcct	240
cagctggac ccctgtggag gtgggcaca ganacttcac cctggagccc ctgagagggg	300
accagccccg ctcanaagggtc tgccccggg acctggccct gccccagtg cctaaggagg	360
cggtctcagg gcgtgtccag ctgccccagc ccttggtggaa gaagtcagaa ctggccccca	420
ctcgaggggc cgtgatggag cagggcacgt cctcgtcaat gacagagtctg tctccagga	480
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gcgtccccca ggatgtacct gctttgtga gacctgcacg tgtgganccc acanacaggg	600
atggtgana agctgganaa agctcggcan agccccccg gagtgacatg ggcanngtgg	660
ggggccaggg tagccacccc cagacactcg genctcgagc tttgggtcc cctcggaaanc	720
gtccagatca ccaggatgtc agctcaccag ccaagactgt gggccgttcc tgggtggtca	780
gcactcagga cgagtggacc ctggcctccc cccacagcct gagatactct gccccacccg	840
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agggccctcg ggcgagaccc ccgggtgcaga agcaggcgctc cctggccgtg agtggcagcg	1020
tggctggcga cttcgtgaag aaggccaccc cttcctgcag aggcttctc gggccggctt	1080
cgctgggccc cgagacacccc agcagggtgg gcatgaaggt cccacacgatc agcgtgaccc	1140
ccttccattc ccagtcgtcc tacatcagca gcgacaaatga ttccggagctc gaggatgtcg	1200
acataaaagaa ggagctgcan agtctgcggg agaagcacct gaaggagato tcggagctgc	1260
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cagtgtgggg ctcactgcan acaacacggg cctgaacggg aangcagtgc anaccancan	1560
ccctgtcccg tccggggctc cctgtcttcn gacatctgtc ccggcttacc antgatggaa	1620
gcggAACGCG tngncaangg tcctccacca acaacctggc ccaggcctga accaagcccc	1680
acccgcctcg cacgtccaag cgcanagtga caacancaac nacaagaaag gttctcncc	1740
gacgaactgc acaaactggt ggacnaatgg acaacaanan ngtggggggc ggcactgaa	1800
acccacnctc nacccctnaa ncnnnaaccnc aacttccana cattgaggcc cgcaggtggg	1860
ctggccttggc naagcccgcc tttnaccccc ctccaaca	1898

<210> 587
<211> 399
<212> PRT
<213> Homo Sapiens

<400> 587

Ala Leu Gly Gln Pro Ala Pro Leu Leu Pro Ala Ala Val Gly Ala Val			
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Ser Leu Ala Thr Ser Gln Leu Pro Ser Pro Pro Leu Gly Pro Thr Val			
20	25	30	
Pro Pro Gln Pro Pro Ser Ala Leu Glu Ser Asp Gly Glu Gly Pro Pro			
35	40	45	
Pro Arg Val Gly Phe Val Asp Ser Thr Ile Lys Ser Leu Asp Lys Leu			
50	55	60	
Arg Thr Leu Leu Tyr Gln Glu His Val Pro Thr Ser Ser Ala Ser Ala			
65	70	75	80
Gly Thr Pro Val Glu Val Gly Asp Arg Phe Thr Leu Glu Pro Leu Arg			

85	90	95
Gly Asp Gln Pro Arg Ser Val Cys	Gly Gly Asp Leu Ala	Leu Pro Pro
100	105	110
Val Pro Lys Glu Ala Val Ser	Gly Arg Val Gln Leu Pro	Gln Pro Leu
115	120	125
Val Glu Lys Ser Glu Leu Ala	Pro Thr Arg Gly Ala	Val Met Glu Gln
130	135	140
Gly Thr Ser Ser Ser Met	Thr Glu Ser Ser	Pro Arg Ser Met Leu Gly
145	150	155
Tyr Asp Arg Asp Gly Arg Gln	Val Ala Ser Asp Ser His	Val Val Pro
165	170	175
Ser Val Pro Gln Asp Val Pro Ala	Phe Val Arg Pro Ala	Arg Val Pro
180	185	190
Thr Arg Asp Gly Gly Ala	Gly Ser Ser Ala Pro Pro	Pro Ser Asp Met
195	200	205
Gly Val Gly Gly Gln Ala	Ser His Pro Gln Thr Leu	Gly Arg Ala Leu
210	215	220
Gly Ser Pro Arg Arg Pro Asp His Gln Asp Val	Ser Ser Pro Ala	Lys
225	230	235
Thr Val Gly Arg Phe Ser Val Val Ser	Thr Gln Asp Glu Trp	Thr Leu
245	250	255
Ala Ser Pro His Ser Leu Arg Tyr	Ser Ala Pro Pro Asp Val	Tyr Leu
260	265	270
Asp Glu Ala Pro Ser Ser Pro Asp Val	Lys Leu Ala Val Arg	Arg Ala
275	280	285
Gln Thr Ala Ser Ser Ile Glu Val	Gly Val Gly Glu Pro Val	Ser Ser
290	295	300
Asp Ser Gly Asp Glu Gly Pro Arg Ala Arg	Pro Pro Val Gln Lys	Gln
305	310	315
Ala Ser Leu Pro Val Ser Gly Ser Val	Ala Gly Asp Phe Val	Lys Lys
325	330	335
Ala Thr Ala Ser Cys Arg Gly	Leu Leu Gly Pro Ala	Ser Leu Gly Pro
340	345	350
Glu Thr Pro Ser Arg Val Gly	Met Lys Val Pro Thr Ile	Ser Val Thr
355	360	365
Ser Phe His Ser Gln Ser Ser	Tyr Ile Ser Ser Asp Asn Asp	Ser Glu
370	375	380
Leu Glu Asp Ala Asp Ile Lys	Lys Glu Leu Ser	Leu Arg Glu Lys
385	390	395

<210> 588

<211> 707

<212> DNA

<213> Homo Sapiens

<400> 588

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caaaaaggc acagaagtca tatggaaatg	aaanaaggtt ttttgcucca	cctccttgc	180
tatatcttat gggcantgga tggaaagaaaa	aaaangaaca aatggAACG	gatggttgtt	240
ctgaacaaaa gtcgtcaaccg tttgcattta	ttgggatagg aaatagtgac	caaaaaatgc	300
agcagctana cttggaaagga aagaactatt	gcacagccaa aacattgtat	atatctgact	360
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<210> 592
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<213> Homo Sapiens

<400> 592

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<210> 593
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<210> 594
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<400> 594

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<210> 595

<211> 600
<212> DNA
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<400> 595

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<210> 596

<211> 835

<212> DNA

<213> Homo Sapiens

<400> 596

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<210> 597

<211> 443

<212> DNA

<213> Homo Sapiens

<400> 597

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<210> 598

<211> 491

<212> DNA

<213> Homo Sapiens

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<210> 599

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<212> DNA

<213> Homo Sapiens

<400> 599

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<210> 600

<211> 523

<212> DNA

<213> Homo Sapiens

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<210> 601

<211> 530

<212> DNA

<213> Homo Sapiens

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<210> 602
<211> 311
<212> DNA
<213> Homo Sapiens

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<210> 603
<211> 289
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<211> 356
<212> DNA
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<210> 605
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<212> DNA
<213> Homo Sapiens

<400> 605

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<210> 606

<211> 714

<212> DNA

<213> Homo Sapiens

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<210> 607

<211> 687

<212> DNA

<213> Homo Sapiens

<400> 607

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<211> 994

<212> DNA

<213> Homo Sapiens

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<210> 610
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<212> DNA
<213> Homo Sapiens

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<210> 611

<211> 663

<212> DNA

<213> Homo Sapiens

<400> 611

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aaggtaatCT	canaaaaaaa	aggtttttg	aaattaaact	tgactttaa	aaaatcatac	180
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gacanactTC	ttgtcccagg	cccttctcan	aaaaacctca	tgtggaaacc	aagctanaga	300
taanaattCT	tccctgatgc	agtttagggg	aaggaaagg	ctagaaactt	cttggcaag	360
caattCCACA	cacagccatt	tatgtgtgag	tgctctgct	caagcacagt	acgcttttg	420
caggGACGGC	cagatgttca	gagtgggagt	ggtactttt	aaccagctaa	aagtgcagaa	480
gtcatctANT	cgtctgcCTC	ttcccactgc	cagtgcctgc	agcctgcag	caactttaa	540
ccacCCCTTA	tgggactgga	atnttgagtt	aaaaagccaa	ngctgaactg	gctgacgctg	600
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tGA						663

<210> 612

<211> 621

<212> DNA

<213> Homo Sapiens

<400> 612

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aaggtaatCTC	anaaaaaaa	ggtttttga	aattaaactt	gactttaa	aaatcatacg	180
gacaaACAC	tttcaaACAA	aactggatta	gtaggattt	ttgcctgct	aactaacatg	240
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aanaattCTT	ccctgatgc	gttaggggaa	agggaaaggc	tagaaactt	tttggcaagc	360
aattCCACNC	acagccattt	atgtgtgagt	gctctgctc	aagcacanta	cgctttgc	420
agggacGGCC	anatgttcnn	antgggagt	gtacttttca	accagctaaa	antgcanaag	480
tcatctANTC	gtctgcCTC	tcccactgCC	agttgcctgc	agccttgcag	catctttaa	540
ccacCCCTAT	nggactggaa	tattgaatta	taaACCCNGG	ntgaactggc	tgangctgtt	600
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<210> 613

<211> 637

<212> DNA

<213> Homo Sapiens

<400> 613

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tantnTnCTN	aaaaaaaaa	ggtttganga	aattaaactt	gactttaa	anatcatgng	180
gacAAACNAC	tttcaaACAA	agctggatta	gnaggattt	tngnctgct	aactaacatn	240
aaanacttCT	tgtcccaggc	cCTnCTnaaa	aaaacctctt	gtggaaaccn	agcnAAAAAT	300
aananttCTC	coctgatgc	ntggggggag	anggagaggc	taaaaactt	tntggcaanc	360
anttCCACNC	acngccattt	ttntnTnAGT	gcnctgctc	nancnnagta	cgctttgg	420
gnggacGGCN	anntnttnat	agngggagt	gtnctttcaa	ccagctaata	ntgaagaaat	480
catctagTCG	nctgcctCTN	cccactgCC	gtgcctgcnt	ccttgcaacn	tcttttaacc	540
ccccCTANGG	acnggattat	nnagttAana	ccgaggntga	gctggntgac	gctntctcct	600
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<210> 614

<211> 673
 <212> DNA
 <213> Homo Sapiens

<400> 614

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cttgaaggct	acaagtggca	aggaagattc	tatttcaa	atagccacag	aaataaagga	180
tggacaaaaa	tctggacag	tgtctctca	gaaacaaccg	gccttgaagg	atacaagtga	240
caaggatgt	tctgttgc	acacagccac	agaaataaaa	gatgaacaaa	aatctggac	300
agtgc	tctgttgc	agtgttaaa	caggagtctc	tacagacctg	atgctgtgc	360
acagcctgt	acagagaatg	agtttctt	ggaatctgag	attatttcaa	aactatacat	420
cccaaagaga	aagattattt	ctccacgatc	tataaaagat	gtgcttc	ctgttgaaga	480
ggctgttgac	aggtgtctc	acctactgga	cggtttgca	cagcctgtga	caaagggata	540
agtttgc	ggaatctgag	aatatttca	aaccatactt	tacgaacaga	aggactattc	600
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catgtttgaa	gac					673

<210> 615
 <211> 714
 <212> DNA
 <213> Homo Sapiens

<400> 615

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tcctttattt	tntgttanct	atatcnaagc	aaaatctgtt	ttgtcccttg	ttaccnnttg	660
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<210> 616
 <211> 688
 <212> DNA
 <213> Homo Sapiens

<400> 616

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acanaatctt	cctcgtcacc	tgtacccttc	aaggctggtg	gtttctgaaa	anacactgtc	180
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cttcctcg	actttagc	ttcaaggctg	gtgggttctg	aaaananact	gtcctanatg	420
tttctccatc	cttttttct	ctggttat	tgaaaaana	atcttctca	tcacttgta	480
ccttcaaggn	tgcttttttc	cganaanaaa	cttcaagcct	ggtgtttgt	cngaaaaaac	540
tgtcctaaaa	tttttctcca	tcctttctt	ctctnggcta	tactcnaaac	aaaatcntcc	600
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<210> 617
<211> 721
<212> DNA
<213> Homo Sapiens

<400> 617

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gccgagggct	gcccgtccgg	gctccgctca	gcacccctcaa	cggcgagatc	agcgccctga	480
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c						721

<210> 618
<211> 461
<212> DNA
<213> Homo Sapiens

<400> 618

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aaaancacca	ancttnacca	ttttttaaan	tttctgctt	ncaaaaanta	aaaacncnca	180
attgnantcc	cacccctaa	attctctgg	nactattagg	tntncaaaaa	gnaccnccn	240
ctccncncca	ttgcctcanc	cncancccc	ggctgnatnc	atthaagggc	ncattggccg	300
ccaatcgnc	tnntccnccc	ncaaattccgg	caaggcnctt	nggggnaaac	ccacaaanca	360
cttattccccc	ctngccccct	gaatggctgg	gttccggccgg	tccctgggn	aggcnctcca	420
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<210> 619
<211> 751
<212> DNA
<213> Homo Sapiens

<400> 619

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aactgaaggc	ccccggggccc	ggaccattac	ggaacaagt	ctgtccctt	naggagaaaa	660
actgaaggac	cgggaaaagg	cncatggca	ttacncccc	ggaaccgg	cccttccggg	720
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<210> 620
 <211> 556
 <212> DNA
 <213> Homo Sapiens

<400> 620
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 gaaaaaaaaag cttaaaaaaa ccaaaaacca aaggcagcat ccttgctaat tttcatctac 180
 attaanaaaa aaaaaatctt gtaactaatg ttttatttn cttaaaaaaaa aatatttcgc 240
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 aagtgtatgt tttgttgctt gctttcaggt tttgtttact ggaaaaaaaa aaaaatgccc 420
 tgcanccca ngcaanaggg ccaanatgca attcaggat ccntggaca ggtccaaaat 480
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<210> 621
 <211> 708
 <212> DNA
 <213> Homo Sapiens

<400> 621
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 caacaaaaac ttgtttaat ngtccttna atttnnacta cttaaaanca taggtntaaa 180
 ggaaaaacnt ncaaactggt ccacttggc ttnttaccag gcaaagnaac cctgcttncc 240
 aaaaactnat atattccaaa ttcnccgcat ntggnaatnt tnccatggac nctgnatctt 300
 aacaaatgct atantntta caaaactacn cccncaaaaa aaccccaagg aacctgcagg 360
 ctaanccta tnctttaaa gggctnaagg aaccaaacct attttaancc tnttngttg 420
 cnccatgcaa aactttatgn aaaacccca aactaggcta tttanchnct nccatnaatg 480
 gnccccaaat cattnatnc tacggcataa acaacanctg cccttattac ncggAACCTG 540
 caaanctcac aagnaatgtg aatngcnct ngggantcaa tggtnccggg tnaattatct 600
 tggatnanaa ccnffffcta catnactatt gaaaaaaaaact gtggtttctt gcttttaac 660
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<210> 622
 <211> 675
 <212> DNA
 <213> Homo Sapiens

<400> 622
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 ccaaagacnt ggaagaaacc aaaagatcg acccgancca ctgaagagat gtttagaggca 240
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 gatntaatga gccaggggtt tcacccctgaa agagaccctt ctgacctana aaaagtgaaa 360
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 ngggagttct gctggacttc cagttcatgc ctgcctggta tncttnccc gagggcctgc 600
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<210> 623
<211> 713
<212> DNA
<213> Homo Sapiens

<400> 623

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acttttatcc	agtacctttt	tcctccatga	tcacctttt	ttctcttcc	cctctccac	180
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ccttccttgt	atctgantct	aggtacttga	gtaagatcgg	caactctcgc	ttgataacag	600
cagtgtccac	tctgaaggta	naagaatcng	gttattatag	cttgctttaa	caaacagcng	660
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<210> 624
<211> 554
<212> DNA
<213> Homo Sapiens

<400> 624

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tggctatctt	cnaggattt	gttggtaaat	gtgaccctcg	agaanaagca	gcgaaagaca	180
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acctaaggga	cagc					554

<210> 625
<211> 551
<212> DNA
<213> Homo Sapiens

<400> 625

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tggggatgg	taatgggtac	aaaaacaaaat	aagatnaaaa	gaatgattt	atatctgata	180
gcacaatana	ntgactataa	tcaataataa	cttacttgc	tatttttaaa	tgatctaaa	240
aatgttaattt	gattatctgt	aattccaaagg	aaaaatgtt	gaggggatgg	atacctcatt	300
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agactgaaat	cttttctaa	ataatgtata	tacatgttt	gtgatctgta	cacacttatt	480
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<210> 626
<211> 680

<212> DNA
 <213> Homo Sapiens

<400> 626

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cgccanaaatg	caaagacgcc	tgagttatac	aacttgcata	tattatccc	tanacagaag	180
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<210> 627

<211> 753

<212> DNA

<213> Homo Sapiens

<400> 627

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tcttagggg	aaagccagag	cttccagatg	gagggtatga	tgatgacatt	atancagaca	180
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cccaagagag	gaaggcgtca	atgaagacag	ctgaagaatt	tctacagcaa	atgaattatt	420
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catatggcag	cccagcacaa	tatggggat	gatggttctg	gccaagtgg	aatttggcgt	660
gtncaaaaca	atggtaggat	ccaagttgac	cnnaactct	atggtgactc	ccatggggt	720
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<210> 628

<211> 675

<212> DNA

<213> Homo Sapiens

<400> 628

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<400> 629

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<400> 630

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<400> 631

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698

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<210> 633
 <211> 734
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<400> 633
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<211> 732

<212> DNA

<213> Homo Sapiens

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<211> 582

<212> DNA

<213> Homo Sapiens

<400> 642

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<210> 643

<211> 784

<212> DNA

<213> Homo Sapiens

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<212> DNA
<213> Homo Sapiens

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<212> DNA
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tatttccatc atgcttattt cttcccaaattt ctaaaccttgc aaggtgattt gaagggaaac	660
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<210> 646
<211> 760
<212> DNA

<213> Homo Sapiens

<400> 646

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tat	aaaagcaaaa	gaataaaagaa	tatatacaa	agggacctgg	aatctgtaa	180
gtgattccaa	aaacnaaata	agtagaaaaat	ccatggtgaa	acctgaacat	tctacctctg	240
cttggagaa	gggcttatcat	acaacattca	gtcagctgaa	natggattgg	tagaggtgtg	300
tctatacata	aacttcagtc	attttgctt	gtgcanaatc	atcccaatct	tcccaanact	360
gaatgggcag	tcctgtggct	ttcttcctt	tccatattcc	caacaaggct	acgtgaagtt	420
caactcttga	tgagccgctt	acaacagcag	ttccttagga	gccaacatga	caggtgggtc	480
aaatttccct	atgaaaaaca	aaactggcca	cctacagcaa	aatatcaaaa	tggttaantc	540
cttccttct	cttcctcctg	attatataca	acatatctcc	tttcaagact	attattccat	600
catgcttatt	ccttcacaaa	tctaaacctt	gaagtgata	gaangaaacc	ncnntccaga	660
aaagaaaact	cnantcanaa	atgaaaaaaaaa	ctggcaggt	tncaatacac	cccaaaaact	720
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<210> 647

<211> 1041

<212> DNA

<213> Homo Sapiens

<400> 647

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tgataaaaaaa	cgcagtgaaa	ttccttgtt	ttgggaaaat	cagccaaacag	gatgtcaaaa	180
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gagcaaaact	gtgtgcucca	ctgtgcctga	gtcaccagaa	gaggaagtga	aggctagcca	300
actttcagtt	cagcagaaca	aattgtctgt	ccagtccaaat	ccttccctc	agctgcggag	360
cgttatgaaa	gtagaaaagtt	ccgaaaatgt	tcctagcccc	acgcattccac	cagttgtaat	420
taatgctgca	gatgatgatg	aagatgatga	tgatcagttt	tctgaggaag	gtgatgaaac	480
caaaacacct	accctgcaac	caactcctga	agttcacaat	ggattacgag	tgacttctgt	540
ccggaaacct	gcagtcaata	taaagcaagg	tgaatgtttt	aattttggaa	taaaaactct	600
tgagggaaatt	aagtcaaaga	aatgaagga	aaaatctaag	aagcaaggtg	agggttcttc	660
aggagttcc	aagtctttt	ctccaccctg	agcccgttcc	aagtctgaa	aaagaaaatg	720
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actaacattt	acaaaaccac	caaagaaagc	tcaagnttcc	aagtccctta	agggaccgan	960
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<210> 648

<211> 810

<212> DNA

<213> Homo Sapiens

<400> 648

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ttat	aaaagcaaa	agaataaaana	atatacaaa	agggacctg	naatctgtaa	180
gctgattcca	aaacnaaata	aantanaaaa	tccatggtg	acgtgaaca	ttctacctct	240
gcttggana	agggcttatca	tacaacattc	antcagctga	aatggattg	gtaaaggtgt	300
gtctatacat	aaacttcant	cattttgct	tgtgcacaaat	catcccaatc	tcccaaaaac	360
tgaatggca	gtcctgtggc	tttcttcctt	ttccatattc	ccaacaaggc	tacntgaant	420

tcaactcttg atnagccgct tacaacagca gttccttagg agccaacatg acaggtgggt	480
caaatttccc tatgaanaaa caaaactggc cacctacagc aaaatatcaa aatgggtaag	540
tccttccttc ctcttcctcc tgattatata caacatatct ccttcaga ctattatttc	600
catcatgctt attccttcac aaatctaaac cttgaggtga tatgaaggaa accancatca	660
agaaaaagaaa accaattcan aaatgaanaa aactggcagg tntacaatac accccananc	720
atctcaatat ccctggcaca gttacaattc agtgttctgc tacagcccat aaaataaata	780
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<210> 649
<211> 656
<212> DNA
<213> Homo Sapiens

<400> 649	
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ttcaaataat gcgnaacaca aaacnntgac taatacaatt gctttaataa tnaaacaaaa	120
ttattttta aaaaancaaa aaaataaaaa atatntacaa aaggcacctg aaatctgtaa	180
nctnatncca aaaaacaaaat aattaaaaaa tccatggtna aacctnaacn tnctacctct	240
gcttngggaaa agggctatca tacaacntnc antcanctna aaatggatng gttaaggtn	300
ntctatacat aaacttcant catttngct tgcataaaat canccaaatc tncccaaaaac	360
tnaatggca ntcctgtggc ttncncctt tnccatatnc ccaacaaggc tacttnaatt	420
tcaactcttn ataancgc tacaacagca ntnccttagn anccaaatn acaggtgggt	480
caaattcccc tataaaaaac aaaactggcc ncctacanca aaatatcaaa atggtaatt	540
ccttcctncc tctncncct nattatatac aacatttctc ctttcaaaac tattattncc	600
atcatgcttn ttccctncaca aatctaaacc ttgangtgat ttgaaggaac cacctc	656

<210> 650
<211> 645
<212> DNA
<213> Homo Sapiens

<400> 650	
gaacttcccn acnnccat tttttaaaac ncaaacaatt ntncnctt ctn tangggc	60
aantggtnca aatantgcn aacncaaaaac tttnactaat acaattgttt taaatntaaa	120
ncaaanttat tttttaaaaa accaaaaaaaaa taaaaatnt ttccaaangg gacctgaaa	180
ctntaaccta atccaaaaaa caaaataatt aaaaannccn ngtnaancc tnaacntnct	240
nccnctnctt tgnaaaaggg ctatcanaca acntncattc ncctaaaaat gnatnggtaa	300
aggttttctt anacataaaac ttcatttcatt ttggcttntn caaaaancacc ccaanctncc	360
caaaaactnnaa tggcnnccnt ntggcttntc cccttccca tntnccaa aaggctactt	420
naatttncaac ncttnataac ccccttacaa caccattncc ttagnaccaa cataacaggt	480
gggtcaaatt nccnataaa aaacaaanct ggcccctncc cccaaatncc caaatggta	540
ttcctnctncc ccctcccccc ngnatataca aacatntcc ctttccanaa atatattccc	600
ccacgcttat tccnccaaa nntaancctt gaagtttattt aagga	645

<210> 651
<211> 780
<212> DNA
<213> Homo Sapiens

<400> 651	
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ctcttttctc cgacat tttt atgtttctaa cattgaacctc taagaagct ggtgaacaaa	120
cacgccatat gtatgcagaa cacttaacag aattatgtca tttttttttt tttttttttt	180
atttcttgc ttttgc ttttgc ttttgc ttttgc ttttgc ttttgc ttttgc ttttgc	240
gcggtgacag ttttgc ttttgc ttttgc ttttgc ttttgc ttttgc ttttgc ttttgc	300

aagctccaga aactaacatt gacaaaacac caaagaaaagc tcaagttcc aagtctctta 360
 aggagcgatt aggcattgtca gctgatccag ataatgagga tgcaacagat aaagttaata 420
 aagttgggtga gatccatgtg aagacattag aagaaattct tcttggaaaga gccaggcaga 480
 aacgtggaga attgcaaact aaactcaaga cagaaggacc ttcaaaaact gatgattcta 540
 cttcaggagc aagaagctcc tccactatcc gtatcaaaaac cttctctgag gtcctggctg 600
 aaaaaaaaaaca tcngcagcag ggaactgaag agacaaaaaa gccnaaagga tacaacttgc 660
 atcaagctaa agattgatag tgaaattaaa aaaaacagta attttngcca cccattgttg 720
 ccngcagaag acaatcanaa gaacctgcag gtaaaacaaa ntctatgcag ggagggtgcc 780

<210> 652
<211> 518
<212> DNA
<213> Homo Sapiens

<400> 652
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aatgggtca aataatgcgg aacacaaaac nttnactaat acaattgctt taaatntnaa 120
acaaaattat ttttaaaaaa ancaaaaaaa taaaaaatnt ttncaaaangg gacctgaaat 180
ctntaancn atnccaaaaa caaaataatt naaaaatcca nggtgaaacc tnaacntnct 240
nccnctgcct tggaaaaggg ctntcataca acnttcattc ncctaaaaat ggattggtaa 300
angttttnt atacataaaac tncattcatt ttgcctntg caaaatcanc ccaanctncc 360
caaaaactnnaa tgggcantcc tntggcttcc tnccttccc anatnccaa caaggctact 420
tnaatttcaa cncttnataa nccgcttaca acancatttc cttaggancc aacatnacgg 480
tgggtcaaat cccctataaa aaacaaaaact ggccncct 518

<210> 653
<211> 490
<212> DNA
<213> Homo Sapiens

<400> 653
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agtcagaaac gtggagaatt gcaaactaaa ctcagacac aaggacattc aaaaactgat 120
gattctactt caggagcaag aagctcctcc actatccgtt tcaaaacctt ctctgaggtc 180
ctggctgaaa aaaaacatcg gcagcaggaa gcagagagac aaaaaagcaa aaaggataca 240
acttgcata agctaaagat tgatagtgaa attaaaaaaa cagtagttt gccaccatt 300
gttgccagca gaggacaatc agaggacct gcaggtaaaa caaagtctat gcagggaggt 360
gcacatcaag acgcttggaaag aaattaaact ggagaaggca ctgaggggtgc agcagagctc 420
tgagagcagc accagctccc cgtctcaaca cnaggccact ccaagggcaa ggccggctgct 480
gcnaatcccc 490

<210> 654
<211> 359
<212> DNA
<213> Homo Sapiens

<400> 654
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tccaattatn nogaacncca aaccttnaan natnccaaatt ncttaaatnt taaaccaaatt 120
tnntttttta aaaagccaaa naattaagaa tttttccaa agggacnng aatccnttag 180
ggtatccca aaaccaaatt agttaaaaat ccctggntaa acccnaacnt tccnccnccn 240
ccttggaaaa agggnnnccn ncnaacccatc atncncntaa aaatgaatgg nttaaagnntt 300
ttcnnncctt aacntccatc cttttgnct nttccaaanc ctccccancc tccccaaaa 359

<210> 655

<211> 611
 <212> DNA
 <213> Homo Sapiens

<400> 655

tgaaaaaaaaaa	catcgccagc	aggaancaga	aagacnaaaa	agcaaaaagg	atactacttg	60
catcangcta	angattgata	gtgaaattaa	aaaaacaga	ttttgccac	ccattgttgc	120
cancagagga	caatcanagg	agcctgcagg	taaaannaag	tctatgcagg	aggtgcacat	180
caagacgctg	gaagaaatta	aactggagaa	g gcactgagg	gtgcagcana	gctctgagag	240
cagcaccagc	tccccgtctc	aacacnaagc	cactccatgg	gcnangcggc	tgctgcant	300
cnccnaaaga	ncagggatga	angaagagaa	gaaccttcag	gaaggaaatg	aatttgcattc	360
tcagancatt	attataactg	aagctnnana	ngcttcnngt	gagaccacng	ganttgacat	420
cactaaaatt	ccagtcaaga	gatgtgagac	catgagagag	aagcacatgc	acaaaacanc	480
nngagaggg	aaaatcagtc	ttgacacctc	ttcggggaga	tgtacatct	tgcggnaccc	540
aantggcaga	gaaaccagtg	ctcactgctg	tgccaggaat	cacncggcac	ctgaccaagc	600
ggcttcccac	a					611

<210> 656
 <211> 634
 <212> DNA
 <213> Homo Sapiens

<400> 656

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tattnntttaa	aaaancnaaa	naataaaagaa	tatntncaaa	agggacctgg	aatctgttag	180
ctgattccaa	aaacnaaata	anttnaaat	cntggtagaa	acctgaacat	tctacctctg	240
ctttggaaaa	gggnatcat	acaacattca	gtcngctgaa	aatggattgg	taaaagtntn	300
tctatacata	aacttcagtc	attttgctt	gtncaaaatc	atcccaatct	tcccaaaaant	360
gaatggcag	tcctgtggct	tttttcctt	tccatattcc	caacaaggnt	acntnaantt	420
caactcttga	nnanccgctt	acaacagcag	ttccttagga	ncccatgac	aggtgggtcn	480
aatttcctta	taaaaaaca	aactggccc	tacagcaaaa	tatccaaatg	ggtnagtcct	540
tccttcctct	tcccctgant	atatacacat	atctccttcc	aanaatanta	tttcccattg	600
cttattcctt	ccnaatcta	aacattgaag	tgat			634

<210> 657
 <211> 958
 <212> DNA
 <213> Homo Sapiens

<400> 657

gaaagaaaaag	catcatgtaa	aaatgaaagc	caagagatgt	gccactcctg	taatcatcga	60
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aggcagtgt	catcaagata	ctgctaaaa	gaatgcatt	tcccccagaga	aagccaagg	180
tagacatact	gtgccttgt	tgccacctgc	aaagcagaag	tttctaaaaa	gtactgagga	240
gcaagagctg	gagaagagta	tgaaaatgca	gcaagaggtg	gtggagatgc	ggaaaaagaa	300
tgaagaattc	aagaaacttg	ctctggctgg	aatagggcaa	cctgtgaaga	aatcagttag	360
ccaggtcacc	aaatcagttt	acttccactt	ccgcacagat	gagcgaatca	aacaacatcc	420
taagaaccag	gaggaatata	aggaagtgaa	cttacatct	gaactacgaa	agcatcctc	480
atctcctgcc	cgagtacta	agggatgtac	cattgttaag	ccttcaacc	tgtcccaagg	540
aaagaaaaaga	acatttgatg	aaacagttt	tacatatgtg	cccttgcac	agcaagttga	600
agacttccat	aaacgaaccc	ctaacagata	tcatttgagg	agcaagaagg	atgatattaa	660
cctgttaccc	tccaaatctt	ctgtgaccaa	gatttgca	gaccacagg	actcctgtac	720
tgcaaacaan	acaccgtgca	cgggctgtga	cctgcaaaa	gtacagcaga	gctggaggct	780
gaggagctnc	gagaaattgc	aaccantaca	anttccaaag	cacgtngaac	cttgattccc	840

agaataacct gangggtggg cccaaccttg cccaagaaaa ccaccngtga aancaancca	900
acggagccct antnggcttt gatttgggaa tttgggaaan gaatncaagg gaggngag	958

<210> 658
<211> 816
<212> DNA
<213> Homo Sapiens

<400> 658	
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gcctgctgcg tggctgctgt gaggctcccc atgaatccac gcagtcttct tcctcaactgg	180
tgcagtttgtt gaggttttctt accctcacag caaagggttc cttaactata aattcacgg	240
atgcagagaa gaggacagaa tctgatttac tgattgttcc tcatttaaac catgacttaa	300
tctctatctt aggatttaac tatctttttt ttctggtaaa aatttttaaa aaaagtgggg	360
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taaattcttag tcagagtgaa gaccatataa aaggccggct gatggttaa aggaagtaac	480
tacatggagt ctaatcgaga cattcatgan ttacatctca ttattagcct tagtaatgt	540
agaaaaacaat tctcaacaaa actggggagtc cacagttgtc aagtatgctt tctcangcac	600
gggttaggtaa aagtctggan aaatgggttc tctccatgcc caatgacaaa gcaagacgg	660
cctaggtttg aagttaaaaa caggtcccaa ttgcccgggc ggtatccgac agtcacagc	720
tgaatttaan catggaaatc caatggaaaa attggganat acnggcacat tcanaaggct	780
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<210> 659
<211> 726
<212> DNA
<213> Homo Sapiens

<400> 659	
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gtcacaagtt aaaagctttt attcctatga tgccccctcg gattcatca atttttcatc	120
cttggatgtt gaaggagata ctcaaaacat agattcatgg tttgaggaga aggccaaattt	180
ggagaataag ttactggggaa agaatggaac tggagggtttt ttccaggca aaactccctt	240
gagaaaggct aatcttcagc aagctattgt cacacctttg aaaccagttt acaacactta	300
ctacaaagag gcagaaaaag aaaatcttgc ggaacaatcc attccgtcaa atgcttgg	360
ttccctggaa gttgaggcag ccataatcaag aaaaactcca gcccagccctc agagaagatc	420
tcttaggttt tctgctcaga aggattgga acagaaagaa aagcatcatg taaaaatgaa	480
agccaagaga tgcactc ctgtaatcat cgatgaaatt ctaccctcta agaaaatgaa	540
agtttctaac ancacaaaga agccagagga agaaggcagt gtcataatcaatactgctga	600
aaagaatgca tctccccaa gagaaagcca aggtagaca tactgtgcct tgcataatcc	660
ctgcanagca gaagtttcaaa aaangtactg angagcaang aatctggaga agatgtgaa	720
aaatgc	726

<210> 660
<211> 824
<212> DNA
<213> Homo Sapiens

<400> 660	
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agtcgttaagg ggcaatagca atagagatta cactgtgctg acacagagac taaaattcttag	120
tcagagtgaa nacccatata aaaggccggc tgatggttt aaggaagtaa ctacatggag	180
tctaatcgag acattcatga gttacatctc attattagcc ttagtaatgt aagaaaacaa	240
ttctcaacaa aactggagtc cacagttgtc aagtatgctt tctcaggcac gggttaggtaa	300

aagtctggan aaatgggttc tctccatgcc caatgacaaa gcaagacggt cctaggttt 360
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 ggaatcgagt ggagaatttg gggagataca gcncnagtca gaggctggc acttgactt 480
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 ctgatttcnt ctcttcttg gggaaaccaag ggccttctgaa aaaanaaaacg gtgtttggaa 780
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<210> 661
<211> 399
<212> DNA
<213> Homo Sapiens

<400> 661
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 caaaacctnc tgcttgctg cttaaggnc cccataannn ccccatnnt cttcccccac 180
 tggtnattt gtnaggttt cttcccccn ccaaaggnt cttacntat aaatcccngg 240
 tttncaaaaa aaaaanaaaa accaatttcn gatnntcccc cttnaancca gnacttaatc 300
 cctntctnag gattnaacaa cttttttt cgggttaaaa ttttaaaaa aatnngggaa 360
 anggttaaat ctttaggggg aatnccnata aaaattacc 399

<210> 662
<211> 826
<212> DNA
<213> Homo Sapiens

<400> 662
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 gaagagtatg aaaatgcagc aagagggtgtt ggagatgcgg aaaaagaatg aagaattccaa 420
 gaaacttgtt ctggctggaa tagggcaacc tgtgaagaaa tcagttagcc aggtcaccaa 480
 atcagttgac ttccacttcc gcacagatga gCGAAATCNA caacatccta nGAACCAGGA 540
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 aacntttgat gaaacagttt ctacatatgt gccccttggc cngcaagttt aagacttccn 720
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<210> 663
<211> 770
<212> DNA
<213> Homo Sapiens

<400> 663
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 gctgcgtggc tgctgtgagg ctccccatgta atccacgca g tcttcttct cactggtgca 180
 gttggtgagg ttttctaccc tcacagcaaa gggatcctta actataaatt cacggatgc 240

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<212> DNA
<213> Homo Sapiens

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<212> DNA
<213> Homo Sapiens

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<210> 666
<211> 734
<212> DNA

<213> Homo Sapiens

<400> 666

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<211> 592

<212> DNA

<213> Homo Sapiens

<400> 667

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<210> 668

<211> 373

<212> DNA

<213> Homo Sapiens

<400> 668

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<211> 661

<212> DNA

<213> Homo Sapiens

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WO 99/04265

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<210> 670

<211> 401

<212> DNA

<213> Homo Sapiens

<400> 670

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<210> 671

<211> 1347

<212> DNA

<213> Homo Sapiens

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<212> DNA
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<212> DNA
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<212> DNA
<213> Homo Sapiens

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<211> 1362
<212> DNA
<213> Homo Sapiens

<400> 677

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<211> 1771
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<400> 678

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<212> DNA
<213> Homo Sapiens

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 <211> 1745
 <212> DNA
 <213> Homo Sapiens

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<211> 1745

<212> DNA

<213> Homo Sapiens

<400> 682

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<210> 683

<211> 3127

<212> DNA

<213> Homo Sapiens

<400> 683

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<211> 803
<212> PRT
<213> Homo Sapiens

<400> 684
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35 40 45
Gln Val Ser Ala Asn Asn Gln Phe Ser Ile Thr Lys Asn Arg Asp Gly
50 55 60
Arg Glu Asn Arg Arg Asn Ser Lys Ile Gly Asp Asp Asn Glu Asn
65 70 75 80
Leu Thr Phe Lys Leu Glu Val Asn Glu Leu Ser Gly Lys Leu Asp Asn
85 90 95
Thr Asn Glu Tyr Asn Ser Asn Asp Gly Lys Lys Leu Pro Gln Gly Glu
100 105 110
Ser Arg Ser Tyr Glu Val Met Gly Ser Met Glu Glu Thr Leu Cys Asn
115 120 125
Ile Asp Asp Arg Asp Gly Asn Arg Asn Val His Leu Glu Phe Thr Glu
130 135 140
Arg Glu Ser Arg Lys Asp Gly Glu Asp Glu Phe Val Lys Glu Met Arg
145 150 155 160
Glu Glu Arg Lys Phe Gln Lys Leu Lys Asn Lys Glu Glu Val Leu Lys
165 170 175
Ala Ser Arg Glu Glu Lys Val Leu Met Asp Glu Gly Ala Val Leu Thr
180 185 190
Leu Ala Ala Asp Leu Ser Ser Ala Thr Leu Asp Ile Ser Lys Gln Trp
195 200 205
Ser Asn Val Phe Asn Ile Leu Arg Glu Asn Asp Phe Glu Pro Lys Phe
210 215 220
Leu Cys Glu Val Lys Leu Ala Phe Lys Cys Asp Gly Glu Ile Lys Thr
225 230 235 240
Phe Ser Asp Leu Gln Ser Leu Arg Lys Phe Ala Ser Gln Lys Ser Ser
245 250 255
Met Xaa Xaa Leu Leu Xaa Asp Val Leu Pro Gln Lys Glu Glu Ile Asn
260 265 270
Gln Gly Arg Lys Tyr Gly Ile Gln Glu Lys Arg Asp Lys Thr Leu
275 280 285
Ile Asp Ser Xaa His Arg Ala Gly Glu Ile Thr Ser Asp Gly Leu Ser
290 295 300
Phe Leu Phe Leu Lys Glu Val Lys Val Ala Lys Pro Glu Glu Met Lys
305 310 315 320
Asn Leu Glu Thr Gln Glu Glu Phe Ser Glu Leu Glu Glu Leu Asp
325 330 335
Glu Glu Ala Ser Gly Met Glu Asp Asp Glu Asp Thr Ser Gly Leu Glu
340 345 350
Glu Glu Glu Glu Glu Ala Ser Gly Leu Glu Glu Asp Xaa Ser Ser
355 360 365
Xaa Leu Glu Glu Glu Glu Gln Thr Ser Glu Gln Asp Ser Thr Phe
370 375 380
Xaa Gly His Thr Leu Val Asp Ala Lys His Glu Val Glu Ile Thr Ser

385	390	395	400
Xaa Gly Met Glu Thr Thr Phe Ile Asp Ser Val Glu Asp Ser Glu Ser			
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Glu Glu Glu Glu Gly Lys Ser Ser Glu Thr Gly Lys Val Lys Thr			
420	425	430	
Thr Ser Leu Thr Glu Lys Lys Ala Ser Arg Arg Gln Lys Glu Ile Pro			
435	440	445	
Phe Ser Tyr Leu Val Gly Asp Ser Gly Lys Lys Lys Leu Val Lys His			
450	455	460	
Gln Val Val His Lys Thr Gln Glu Glu Glu Thr Ala Val Pro Thr			
465	470	475	480
Ser Gln Gly Thr Gly Thr Cys Leu Thr Leu Cys Leu Ala Ser Pro			
485	490	495	
Ser Lys Ser Leu Glu Met Ser His Asp Glu His Lys Lys His Ser His			
500	505	510	
Thr Asn Leu Ser Ile Ser Thr Gly Val Thr Lys Leu Lys Lys Thr Glu			
515	520	525	
Glu Lys Lys His Arg Thr Leu His Thr Glu Glu Leu Thr Ser Lys Glu			
530	535	540	
Ala Asp Leu Thr Glu Glu Thr Glu Glu Asn Leu Arg Ser Ser Val Ile			
545	550	555	560
Asn Ser Ile Arg Glu Ile Lys Glu Glu Ile Gly Asn Leu Lys Ser Ser			
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His Ser Gly Val Leu Glu Ile Glu Asn Ser Val Asp Asp Leu Ser Ser			
580	585	590	
Arg Met Asp Ile Leu Glu Glu Arg Ile Asp Ser Leu Glu Asp Gln Ile			
595	600	605	
Glu Glu Phe Ser Lys Asp Thr Met Gln Met Thr Lys Gln Ile Ile Ser			
610	615	620	
Lys Glu Gly Pro Arg Asp Ile Glu Glu Arg Ser Arg Ser Cys Asn Ile			
625	630	635	640
Arg Leu Ile Gly Ile Pro Glu Lys Glu Ser Tyr Glu Asn Arg Ala Glu			
645	650	655	
Asp Ile Ile Lys Glu Ile Ile Asp Glu Asn Phe Ala Glu Leu Lys Lys			
660	665	670	
Gly Ser Ser Leu Glu Ile Val Ser Ala Cys Arg Val Pro Ser Lys Ile			
675	680	685	
Asp Glu Lys Arg Leu Thr Pro Arg His Ile Leu Val Lys Phe Trp Asn			
690	695	700	
Ser Ser Asp Lys Glu Lys Ile Ile Arg Pro Ser Arg Glu Arg Arg Glu			
705	710	715	720
Ile Thr Tyr Gln Gly Thr Arg Ile Arg Leu Thr Ala Asp Leu Ser Leu			
725	730	735	
Asp Thr Leu Asp Ala Arg Ser Lys Trp Ser Asn Val Phe Lys Val Leu			
740	745	750	
Leu Glu Lys Gly Phe Asn Pro Arg Thr Leu Tyr Pro Ala Lys Met Ala			
755	760	765	
Phe Asp Phe Arg Gly Lys Thr Lys Val Phe Leu Ser Ile Glu Glu Phe			
770	775	780	
Arg Asp Tyr Val Leu His Met Pro Thr Leu Arg Glu Leu Leu Gly Asn			
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Asn Ile Pro			

<210> 685

<211> 947
 <212> PRT
 <213> Homo Sapiens

<400> 685

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			20					25					30		
Gln	Tyr	Leu	Gln	Lys	Val	Val	Leu	Lys	Asp	Leu	Trp	Lys	His	Ser	Phe
			35					40				45			
Ser	Trp	Pro	Phe	Gln	Arg	Pro	Val	Asp	Ala	Val	Lys	Leu	Lys	Leu	Pro
	50					55				60					
Asp	Tyr	Tyr	Thr	Ile	Ile	Lys	Asn	Pro	Met	Asp	Leu	Asn	Thr	Ile	Lys
65					70					75			80		
Lys	Arg	Leu	Glu	Asn	Lys	Tyr	Tyr	Ala	Lys	Ala	Ser	Glu	Cys	Ile	Glu
			85						90			95			
Asp	Phe	Asn	Thr	Met	Phe	Ser	Asn	Cys	Tyr	Leu	Tyr	Asn	Lys	Pro	Gly
	100						105					110			
Asp	Asp	Ile	Val	Leu	Met	Ala	Gln	Ala	Leu	Glu	Lys	Leu	Phe	Met	Gln
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Lys	Leu	Ser	Gln	Met	Pro	Gln	Glu	Glu	Gln	Val	Val	Gly	Val	Lys	Glu
	130					135				140					
Arg	Ile	Lys	Lys	Gly	Thr	Gln	Gln	Asn	Ile	Ala	Val	Ser	Ser	Ala	Lys
145						150				155			160		
Glu	Lys	Ser	Ser	Pro	Ser	Ala	Thr	Glu	Lys	Val	Phe	Lys	Gln	Gln	Glu
						165			170			175			
Ile	Pro	Ser	Val	Phe	Pro	Lys	Thr	Ser	Ile	Ser	Pro	Leu	Asn	Val	Val
						180			185			190			
Gln	Gly	Ala	Ser	Val	Asn	Ser	Ser	Ser	Gln	Thr	Ala	Ala	Gln	Val	Thr
						195			200			205			
Lys	Gly	Val	Lys	Arg	Lys	Ala	Asp	Thr	Thr	Thr	Pro	Ala	Thr	Ser	Ala
		210				215			220						
Val	Lys	Ala	Ser	Ser	Glu	Phe	Ser	Pro	Thr	Phe	Thr	Glu	Lys	Ser	Val
225					230				235			240			
Ala	Leu	Pro	Pro	Ile	Lys	Glu	Asn	Met	Pro	Lys	Asn	Val	Leu	Pro	Asp
						245			250			255			
Ser	Gln	Gln	Gln	Tyr	Asn	Val	Val	Glu	Thr	Val	Lys	Val	Thr	Glu	Gln
					260			265			270				
Leu	Arg	His	Cys	Ser	Glu	Ile	Leu	Lys	Glu	Met	Leu	Ala	Lys	Lys	His
						275			280			285			
Phe	Ser	Tyr	Ala	Trp	Pro	Phe	Tyr	Asn	Pro	Val	Asp	Val	Asn	Ala	Leu
						290			295			300			
Gly	Leu	His	Asn	Tyr	Tyr	Asp	Val	Val	Lys	Asn	Pro	Met	Asp	Leu	Gly
305						310				315			320		
Thr	Ile	Lys	Glu	Lys	Met	Asp	Asn	Gln	Glu	Tyr	Lys	Asp	Ala	Tyr	Ser
						325			330			335			
Phe	Ala	Ala	Asp	Val	Arg	Leu	Met	Phe	Met	Asn	Cys	Tyr	Lys	Tyr	Asn
						340			345			350			
Pro	Pro	Asp	His	Glu	Val	Val	Thr	Met	Ala	Arg	Met	Leu	Gln	Asp	Val
						355			360			365			
Phe	Glu	Thr	His	Phe	Ser	Lys	Ile	Pro	Ile	Glu	Pro	Val	Glu	Ser	Met
						370			375			380			
Pro	Leu	Cys	Tyr	Ile	Lys	Thr	Asp	Ile	Thr	Glu	Thr	Thr	Gly	Arg	Glu
						385			390			395			400

Asn Thr Asn Glu Ala Ser Ser Glu Gly Asn Ser Ser Asp Asp Ser Glu
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 Asp Glu Arg Val Lys Arg Leu Ala Lys Leu Gln Glu Gln Leu Lys Ala
 420 425 430
 Val His Gln Gln Leu Gln Val Leu Ser Gln Val Pro Phe Arg Lys Leu
 435 440 445
 Asn Lys Lys Lys Glu Lys Ser Lys Lys Glu Lys Lys Lys Glu Lys Val
 450 455 460
 Asn Asn Ser Asn Glu Asn Pro Arg Lys Met Cys Glu Gln Met Arg Leu
 465 470 475 480
 Lys Glu Lys Ser Lys Arg Asn Gln Pro Lys Lys Arg Lys Gln Gln Phe
 485 490 495
 Ile Gly Leu Lys Ser Glu Asp Glu Asp Asn Ala Lys Pro Met Asn Tyr
 500 505 510
 Asp Glu Lys Arg Gln Leu Ser Leu Asn Ile Asn Lys Leu Pro Gly Asp
 515 520 525
 Lys Leu Gly Arg Val Val His Ile Ile Gln Ser Arg Glu Pro Ser Leu
 530 535 540
 Ser Asn Ser Asn Pro Asp Glu Ile Glu Ile Asp Phe Glu Thr Leu Lys
 545 550 555 560
 Ala Ser Thr Leu Arg Glu Leu Glu Lys Tyr Val Ser Ala Cys Leu Arg
 565 570 575
 Lys Arg Pro Leu Lys Pro Pro Ala Lys Lys Ile Met Met Ser Lys Glu
 580 585 590
 Glu Leu His Ser Gln Lys Lys Gln Glu Leu Glu Lys Arg Leu Leu Asp
 595 600 605
 Val Asn Asn Gln Leu Asn Ser Arg Lys Arg Gln Thr Lys Ser Asp Lys
 610 615 620
 Thr Gln Pro Ser Lys Ala Val Glu Asn Val Ser Arg Leu Ser Glu Ser
 625 630 635 640
 Ser Ser Ser Ser Ser Ser Glu Ser Glu Ser Ser Ser Ser Asp
 645 650 655
 Leu Ser Ser Asp Ser Ser Asp Ser Glu Ser Glu Met Phe Pro Lys
 660 665 670
 Phe Thr Glu Val Lys Pro Asn Asp Ser Pro Ser Lys Glu His Val Lys
 675 680 685
 Lys Met Lys Asn Glu Cys Ile Leu Pro Glu Gly Arg Thr Gly Val Thr
 690 695 700
 Gln Ile Gly Tyr Cys Val Gln Asp Thr Thr Ser Ala Asn Thr Thr Leu
 705 710 715 720
 Val His Gln Thr Thr Pro Ser His Val Met Pro Pro Asn His His Gln
 725 730 735
 Leu Ala Phe Asn Tyr Gln Glu Leu Glu His Leu Gln Thr Val Lys Asn
 740 745 750
 Ile Ser Pro Leu Gln Ile Leu Pro Pro Ser Gly Asp Ser Glu Gln Leu
 755 760 765
 Ser Asn Gly Ile Thr Val Met His Pro Ser Gly Asp Ser Asp Thr Thr
 770 775 780
 Met Leu Glu Ser Glu Cys Gln Ala Pro Val Gln Lys Asp Ile Lys Ile
 785 790 795 800
 Lys Asn Ala Asp Ser Trp Lys Ser Leu Gly Lys Pro Val Lys Pro Ser
 805 810 815
 Gly Val Met Lys Ser Ser Asp Glu Leu Phe Asn Gln Phe Arg Lys Ala
 820 825 830
 Ala Ile Glu Lys Glu Val Lys Ala Arg Thr Gln Glu Leu Ile Arg Lys

835	840	845
His Leu Glu Gln Asn Thr Lys	Glu Leu Lys Ala Ser Gln	Glu Asn Gln
850	855	860
Arg Asp Leu Gly Asn Gly	Leu Thr Val Glu Ser Phe	Ser Asn Lys Ile
865	870	875
Gln Asn Lys Cys Ser Gly	Glu Gln Lys	Glu His Pro Gln Ser Ser
885	890	895
Glu Ala Gln Asp Lys Ser Lys	Leu Trp Leu Leu Lys Asp Arg	Asp Leu
900	905	910
Ala Arg Pro Lys Glu Gln Glu Arg Arg Arg	Arg Glu Ala Met Val	Gly
915	920	925
Thr Ile Asp Met Thr Leu Gln Ser Asp Ile Met	Thr Met Phe Glu Asn	
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Asn Phe Asp		
945		

<210> 686
<211> 3106
<212> DNA
<213> Homo Sapiens

<400> 686

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<210> 687

<211> 1759

<212> DNA

<213> Homo Sapiens

<400> 687

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attagtcaag catggttgg

1759

<210> 688

<211> 207

<212> PRT

<213> Homo Sapiens

<400> 688

Met	Ser	Glu	Thr	Val	Pro	Ala	Ala	Ser	Ala	Ser	Ala	Gly	Leu	Ala	Ala
1								10						15	
Met	Glu	Lys	Leu	Pro	Thr	Lys	Lys	Arg	Gly	Arg	Lys	Pro	Ala	Gly	Leu
								20		25				30	
Ile	Ser	Ala	Ser	Arg	Lys	Val	Pro	Asn	Leu	Ser	Val	Ser	Lys	Leu	Ile
								35		40			45		
Thr	Glu	Ala	Leu	Ser	Val	Ser	Gln	Glu	Arg	Val	Gly	Met	Ser	Leu	Val
							50		55		60				
Ala	Leu	Lys	Ala	Leu	Ala	Ala	Ala	Gly	Tyr	Asp	Val	Glu	Lys	Asn	
							65		70		75		80		
Asn	Ser	Arg	Ile	Lys	Leu	Ser	Leu	Lys	Ser	Leu	Val	Asn	Lys	Gly	Ile
							85		90			95			
Leu	Val	Gln	Thr	Arg	Gly	Thr	Gly	Ala	Ser	Gly	Ser	Phe	Lys	Leu	Ser
							100		105			110			
Lys	Lys	Val	Ile	Pro	Lys	Ser	Thr	Arg	Ser	Lys	Ala	Lys	Lys	Ser	Val
							115		120			125			
Ser	Ala	Lys	Thr	Lys	Lys	Leu	Val	Leu	Ser	Arg	Asp	Ser	Lys	Ser	Pro
							130		135		140				
Lys	Thr	Ala	Lys	Thr	Asn	Lys	Arg	Ala	Lys	Lys	Pro	Arg	Ala	Thr	Thr
							145		150		155		160		
Pro	Lys	Thr	Val	Arg	Ser	Gly	Arg	Lys	Ala	Lys	Gly	Ala	Lys	Gly	Lys
							165		170			175			
Gln	Gln	Gln	Lys	Ser	Pro	Val	Lys	Ala	Arg	Ala	Ser	Lys	Ser	Lys	Leu
							180		185			190			
Thr	Gln	His	His	Glu	Val	Asn	Val	Arg	Lys	Ala	Thr	Ser	Lys	Lys	
							195		200			205			

<210> 689

<211> 1464

<212> DNA

<213> Homo Sapiens

<400> 689

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ggagggtcccT	ggccaaagat	ttatttctct	tgacaaccaa	gggcctccgt	ctggatttcc		120
aaggaagaat	ttcctctgaa	gcacccgaaac	ttgctactac	cagcaccatg	ccctaccaat		180
atccagcact	gaccccgagg	cagaagaagg	agctgtctga	catcgctcac	cgcacatgtgg		240
cacctggcaa	gggcacatcctg	gctgcagatg	agtccactgg	gagcattgcc	aagcggctgc		300
agtccatgg	caccgagaac	accgaggaga	accggcgctt	ctaccgcccag	ctgctgtga		360
cagctgacga	ccgcgtgaac	ccctgcattg	gggggtgtcat	cctcttccat	gagacactct		420
accagaaggc	ggatgatgggg	cgtcccttcc	ccaaagttat	caaatccaag	ggcgggtttg		480
tggggcatcaa	ggtagacaag	ggcgtggtcc	ccctggcagg	gacaaatggc	gagactacca		540
cccaagggtt	ggatgggctg	tctgagcgct	gtgcccagta	caagaaggac	ggagctgact		600
tgcgtcaatgt	gcgttgtgtg	ctgaagattg	ggaaacacac	cccctcagcc	ctcgccatca		660
tggaaaatgc	caatgttctg	gccccgttatg	ccagtatctg	ccagcagaat	ggcatttgtgc		720
ccatcggtga	gcctgagatc	ctccctgatg	gggaccatgg	cttgaagcgc	tgccagatatg		780
tgaccgagaa	ggtgtcggtctaca	aggctccggag	tgaccaccac	atctacctgg			840

aaggcacctt	gctgaagccc	aacatggtca	ccccaggcca	tgcttgcact	cagaagttt	900
ctcatgagga	gattgccatg	gcgaccgtca	cagcgctgca	ccgcacagtgc	ccccccgctg	960
tcactggat	cacccctcgt	tctggaggcc	agagtgagga	ggaggcgctcc	atcaacctca	1020
atgccattaa	caagtcccc	ctgctgaagc	cctggggccct	gaccccttcc	tacggccgag	1080
ccctgcaggc	ctctgcctg	aaggcctggg	gcgggaagaa	ggagaacitg	aaggctgcgc	1140
aggaggagta	tgtcaagcga	gcctggcca	acagccttgc	ctgtcaagga	aagtacactc	1200
cgagcgggtca	ggctggggct	gtgccagcg	agtcccttct	cgtctctaac	cacgcctatt	1260
aagcggaggt	gttcccaggc	tgcggccaaac	aactccaggc	cctgccccct	cccactcttg	1320
aagaggaggc	cgccctccctg	gggctccagg	ctggcttgcc	cgegcctttt	cttccctcg	1380
gacagtgggt	tgtgtgtcg	tctgtaatg	ctaagtccat	cacccttcc	ggcacactgc	1440
caaataaaaca	gctatttaag	gggg				1464

<210> 690

<211> 363

<212> PRT

<213> Homo Sapiens

<400> 690

Pro	Tyr	Gln	Tyr	Pro	Ala	Leu	Thr	Pro	Glu	Gln	Lys	Lys	Glu	Leu	Ser	
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Asp	Ile	Ala	His	Arg	Ile	Val	Ala	Pro	Gly	Lys	Gly	Ile	Leu	Ala	Ala	
																20
Asp	Glu	Ser	Thr	Gly	Ser	Ile	Ala	Lys	Arg	Leu	Gln	Ser	Ile	Gly	Thr	
																35
Glu	Asn	Thr	Glu	Glu	Asn	Arg	Arg	Phe	Tyr	Arg	Gln	Leu	Leu	Leu	Thr	
																50
Ala	Asp	Asp	Arg	Val	Asn	Pro	Cys	Ile	Gly	Gly	Val	Ile	Leu	Phe	His	
																65
Glu	Thr	Leu	Tyr	Gln	Lys	Ala	Asp	Asp	Gly	Arg	Pro	Phe	Pro	Gln	Val	
																85
Ile	Lys	Ser	Lys	Gly	Gly	Val	Val	Gly	Ile	Lys	Val	Asp	Lys	Gly	Val	
																100
Val	Pro	Leu	Ala	Gly	Thr	Asn	Gly	Glu	Thr	Thr	Thr	Gln	Gly	Leu	Asp	
																115
Gly	Leu	Ser	Glu	Arg	Cys	Ala	Gln	Tyr	Lys	Asp	Gly	Ala	Asp	Phe		
																130
Ala	Lys	Trp	Arg	Cys	Val	Leu	Lys	Ile	Gly	Glu	His	Thr	Pro	Ser	Ala	
																145
Leu	Ala	Ile	Met	Glu	Asn	Ala	Asn	Val	Leu	Ala	Arg	Tyr	Ala	Ser	Ile	
																165
Cys	Gln	Gln	Asn	Gly	Ile	Val	Pro	Ile	Val	Glu	Pro	Glu	Ile	Leu	Pro	
																180
Asp	Gly	Asp	His	Asp	Leu	Lys	Arg	Cys	Gln	Tyr	Val	Thr	Glu	Lys	Val	
																195
Leu	Ala	Ala	Val	Tyr	Lys	Ala	Leu	Ser	Asp	His	His	Ile	Tyr	Leu	Glu	
																210
Gly	Thr	Leu	Leu	Lys	Pro	Asn	Met	Val	Thr	Pro	Gly	His	Ala	Cys	Thr	
																225
Gln	Lys	Phe	Ser	His	Glu	Glu	Ile	Ala	Met	Ala	Thr	Val	Thr	Ala	Leu	
																245
Arg	Arg	Thr	Val	Pro	Pro	Ala	Val	Thr	Gly	Ile	Thr	Phe	Leu	Ser	Gly	
																260
Gly	Gln	Ser	Glu	Glu	Glu	Ala	Ser	Ile	Asn	Leu	Asn	Ala	Ile	Asn	Lys	
																275
Cys	Pro	Leu	Leu	Lys	Pro	Trp	Ala	Leu	Thr	Phe	Ser	Tyr	Gly	Arg	Ala	
																280

290	295	300
Leu Gln Ala Ser Ala Leu Lys Ala Trp Gly Gly Lys Lys Glu Asn Leu		
305	310	315
Lys Ala Ala Gln Glu Glu Tyr Val Lys Arg Ala Leu Ala Asn Ser Leu		320
325	330	335
Ala Cys Gln Gly Lys Tyr Thr Pro Ser Gly Gln Ala Gly Ala Ala Ala		
340	345	350
Ser Glu Ser Leu Phe Val Ser Asn His Ala Tyr		
355	360	

<210> 691
<211> 1216
<212> DNA
<213> Homo Sapiens

<400> 691	60
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ctggcagtcc agctctccaa ggggcgttag agtgttctga tcatctccac agacccagca	240
cacaacatct cagatgcttt tgaccagaag ttctcaaagg tgcctaccaa ggtcaaaggc	300
tatgacaacc tcttgctat ggagattgac cccagcctgg gcgtggcgga cgtgcctgac	360
gagttcttcg aggaggacaa catgctgagc atgggcagaag agatgtatgcgaa ggaggccatg	420
agcgcatttc ccggcatcga tgaggccatg agctatgcgg aggtcatgag gctggtaag	480
ggcatgaact tctcggtggt ggtatttgcg acggcaccca cgggccacac cctgaggctg	540
ctcaacttcc ccaccatcgt ggagccccggc ctggggccggc ttatgcagat caagaaccag	600
atcagccctt tcatactcaca gatgtcaac atgctggggc tgggggacat gaacgcagac	660
cagctggcct ccaagctggaa ggagacgctg cccgtcatcc gctcagtcag cgaacagttc	720
aaggaccctg agcagacaac tttcatctgc gtatgcattt ctgagttctt gtccctgttat	780
gagacagaga ggctgatcca ggagctggcc aagtgcagaat ttgacacaca caatataatt	840
gtcaaccagg tcgtcttccc cgaccctcgag aagccctgca agatgtgtga ggccctgtcac	900
aagatccagg ccaagtatct ggaccagatg gaggacctgt atgaagactt ccacatcgtg	960
aagctgcgcg tggtaaaaaa tgaggtgcgg gggcagaca aggtcaacac cttctcgcc	1020
ctccctctgg agccctacaa gccccccagt gcccagtagc acagctgcca gcccccaaccg	1080
ctgccatttc acactcaccc tccaccctcc ccaccccttc gggcagagt ttgcacaaaag	1140
tcccccatt aatacagggg gagccacttg ggcaggagc agggaggggt ccattcccc	1200
tggtggggct ggtggggagc tgttagttgcc ccctacctct cccacctt gctttcaat	1216
aatgatctt aaactg	

<210> 692
<211> 1958
<212> DNA
<213> Homo Sapiens

<400> 692	60
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tcccgccacatcgtccatcc gcccctcgcc tccggagttcc cctggccag atctaaccat	240
gagctacccct ggctatcccc cggcccccagg tggctaccca ccagctgcac caggtggtag	300
tccctggggta ggtgctgcct accctctccccc gcccagcatg ccccccattcg ggctggataa	360
cgtggccacc tatgcggggc agttcaacca ggactatctc tcggaaatgg cggccaaacat	420
gtctgggaca tttggaggag ccaacatgcc caacctgtac cctggggccccc ctggggctgg	480
ctacccacca gtgccccctg gcggctttgg gcagcccccc tctgcccagc agcctgttcc	540
tccctatggg atgtatccac ccccaaggagg aaacccaccc tccaggatgc cctcatatcc	600
gccataacca gggccccctg tgccgggcca gcccattgcac ccccccggac agcagcccccc	660
aggggcctac cctgggcagc caccagtgcac ctacccttgtt cagcctccag tgccactcccc	

tggcagcag cagccagtgc cgagctaccc aggatacccg gggctggga ctgtcacccc	720
cgctgtcccc ccaacccagt ttggaagccg aggcaccatc actgatgctc ccggcttga	780
ccccctgcga gatgccgagg tcctgcggaa ggcacatgaaa ggcttcggga cgatgagca	840
gcccatcatt gactgcctgg ggagtcgctc caacaagcag cggcagcaga tcctacttc	900
cttcaagacg gcttacggca aggatttgat caaatctg aaatctgaac tgtcaggaaa	960
cttgagaag acaatcttgg ctctgtgaa gacccctgatc ctcttgaca tttatgagat	1020
aaaggaagcc atcaaggggg ttggcactga tgaagcctgc ctgattgaga tcctcgctc	1080
ccgcagcaat gagcacatcc gagaattaaa cagagcctac aaagcagaat taaaaagac	1140
ccttggaaagag gccattcgaa gcgacacatc agggcacttc cagggctcc tcatctct	1200
ctctcaggaa aaccgtgatg aaagcacaaa cgtggacatg tcactcgccc agagagatgc	1260
ccaggagctg tatgcggccg gggagaaccc cctgggaaaca gacgagtcca agttcaatgc	1320
ggttctgtgc tcccgagcc gggcccaccc gtagcgtt ttcaatgagt accagagaat	1380
gacaggccgg gacattgaga agacatctg cccggagatg tccggggacc tggaggaggg	1440
catgctggcc gtggtaaat gtctcaagaa tacccctgatc ttcttgccg agaggctcaa	1500
caaggccatg agggggggcag gaacaaagga coggaccctg attcgcatca tggtgtctcg	1560
cagcgagacc gacctcctgg acatcagatc agagtataag cggatgtacg gcaagtcgt	1620
gtaccacgac atctcggag atacttcagg ggttaccgg aagattctgc tgaagatctg	1680
tggtgcaat gactgaacag tgactggtg ctcacttctg cccacctgcc ggcaacacca	1740
gtgccaggaa aaggccaaaa gaatgtctgt ttctaacaaa tccacaaata gccccgagat	1800
tcaccgtcct agagcttagg cctgtctcc acccctctg acccgatag tggccacag	1860
gacctgggtc ggctagaac tctctcagga tgcctttct accccatccc tcacagcctc	1920
ttgctgctaa aatagatgtt tcattttct gaaaaaaaaa	1958

<210> 693

<211> 505

<212> PRT

<213> Homo Sapiens

<400> 693

Met Ser Tyr Pro Gly Tyr Pro Pro Pro Gly Gly Tyr Pro Pro Ala	
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Ala Pro Gly Gly Pro Trp Gly Gly Ala Ala Tyr Pro Pro Pro	
20 25 30	
Ser Met Pro Pro Ile Gly Leu Asp Asn Val Ala Thr Tyr Ala Gly Gln	
35 40 45	
Phe Asn Gln Asp Tyr Leu Ser Gly Met Ala Ala Asn Met Ser Gly Thr	
50 55 60	
Phe Gly Gly Ala Asn Met Pro Asn Leu Tyr Pro Gly Ala Pro Gly Ala	
65 70 75 80	
Gly Tyr Pro Pro Val Pro Pro Gly Gly Phe Gly Gln Pro Pro Ser Ala	
85 90 95	
Gln Gln Pro Val Pro Pro Tyr Gly Met Tyr Pro Pro Pro Gly Gly Asn	
100 105 110	
Pro Pro Ser Arg Met Pro Ser Tyr Pro Pro Tyr Pro Gly Ala Pro Val	
115 120 125	
Pro Gly Gln Pro Met Pro Pro Gly Gln Gln Pro Pro Gly Ala Tyr	
130 135 140	
Pro Gly Gln Pro Pro Val Thr Tyr Pro Gly Gln Pro Pro Val Pro Leu	
145 150 155 160	
Pro Gly Gln Gln Pro Val Pro Ser Tyr Pro Gly Tyr Pro Gly Ser	
165 170 175	
Gly Thr Val Thr Pro Ala Val Pro Pro Thr Gln Phe Gly Ser Arg Gly	
180 185 190	
Thr Ile Thr Asp Ala Pro Gly Phe Asp Pro Leu Arg Asp Ala Glu Val	
195 200 205	

Leu Arg Lys Ala Met Lys Gly Phe Gly Thr Asp Glu Gln Ala Ile Ile
 210 215 220
 Asp Cys Leu Gly Ser Arg Ser Asn Lys Gln Arg Gln Gln Ile Leu Leu
 225 230 235 240
 Ser Phe Lys Thr Ala Tyr Gly Lys Asp Leu Ile Lys Asp Leu Lys Ser
 245 250 255
 Glu Leu Ser Gly Asn Phe Glu Lys Thr Ile Leu Ala Leu Met Lys Thr
 260 265 270
 Pro Val Leu Phe Asp Ile Tyr Glu Ile Lys Glu Ala Ile Lys Gly Val
 275 280 285
 Gly Thr Asp Glu Ala Cys Leu Ile Glu Ile Leu Ala Ser Arg Ser Asn
 290 295 300
 Glu His Ile Arg Glu Leu Asn Arg Ala Tyr Lys Ala Glu Phe Lys Lys
 305 310 315 320
 Thr Leu Glu Glu Ala Ile Arg Ser Asp Thr Ser Gly His Phe Gln Arg
 325 330 335
 Leu Leu Ile Ser Leu Ser Gln Gly Asn Arg Asp Glu Ser Thr Asn Val
 340 345 350
 Asp Met Ser Leu Ala Gln Arg Asp Ala Gln Glu Leu Tyr Ala Ala Gly
 355 360 365
 Glu Asn Arg Leu Gly Thr Asp Glu Ser Lys Phe Asn Ala Val Leu Cys
 370 375 380
 Ser Arg Ser Arg Ala His Leu Val Ala Val Phe Asn Glu Tyr Gln Arg
 385 390 395 400
 Met Thr Gly Arg Asp Ile Glu Lys Ser Ile Cys Arg Glu Met Ser Gly
 405 410 415
 Asp Leu Glu Glu Gly Met Leu Ala Val Val Lys Cys Leu Lys Asn Thr
 420 425 430
 Pro Ala Phe Phe Ala Glu Arg Leu Asn Lys Ala Met Arg Gly Ala Gly
 435 440 445
 Thr Lys Asp Arg Thr Leu Ile Arg Ile Met Val Ser Arg Ser Glu Thr
 450 455 460
 Asp Leu Leu Asp Ile Arg Ser Glu Tyr Lys Arg Met Tyr Gly Lys Ser
 465 470 475 480
 Leu Tyr His Asp Ile Ser Gly Asp Thr Ser Gly Asp Tyr Arg Lys Ile
 485 490 495
 Leu Leu Lys Ile Cys Gly Gly Asn Asp
 500 505

<210> 694
 <211> 1141
 <212> DNA
 <213> Homo Sapiens

<400> 694

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cctgatggtt	ggaaggaacc	agcttttcc	aaagaggaca	atcccagagg	acttttgag	180
gagagcgtt	tcgcaacttt	gttcccaaaa	tacagggaaag	cttacttcaa	agagtgttgg	240
ccattgggtc	agaaagcctt	aatgaacat	catgttaatg	caaccctgga	cctgatcgaa	300
ggcagcatga	ctgtttgtac	tacaaagaag	acttttgatc	catatatcat	cattagggcc	360
agagatctga	taaaaactgtt	agcaaggagt	gtttcatttg	aacaggcgt	acgaattctt	420
caggatgtat	ttgcatgtga	catcattaaa	ataggttctt	tagtaagaa	taaagagaga	480
tttgtaaaac	gaagacaaacg	gcttattggt	cccaaaggat	ctacattgaa	ggcattggaa	540
ctcttaacta	attgttacat	tatggttcag	ggaaacacag	tttcagccat	tggacctttt	600

agtggcttaa aagaggtag	aaaagttagc cttgatacta tgaagaatat tcatccaatt	660
tataacat	aaagcttaat gattaagaga gagttggcaa aagattctga attacgatca	720
caaagttgg	agagatttt gccacagtcc aaacacaaaa atgtgataa acgcaaggaa	780
ccaaagaaaa	aaactgttaa gaaagatata cgccattccc accaccacaa ccagaaagtc	840
agatcgataa	agaattggct agtggtaat acttttgaa ggcaaattcag aagaagcggc	900
agaaaaatgaa	gcaataaagg ctaacaaggc agaagccatc agtaagagac aagagggaaag	960
aaacaaagca	tttattccac ctaaggaaaa accaattgtg aaacctaagg aagttctac	1020
tgaaaactaaa	attgatgtgg ccagcatcaa ggaaaaggaa aagaaagcaa agaataagaa	1080
actgggagct	cttacagctg aagaaattgc acttaagatg gaggcagatg aaaaaaaaaaa	1140
a		1141

<210> 695
<211> 288
<212> PRT
<213> Homo Sapiens

<400> 695																
Met	Ala	Ser	Pro	Ser	Leu	Glu	Arg	Pro	Glu	Lys	Gly	Ala	Gly	Lys	Ser	
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Glu	Phe	Arg	Asn	Gln	Lys	Pro	Lys	Pro	Glu	Asn	Gln	Asp	Glu	Ser	Glu	
					20				25				30			
Leu	Leu	Thr	Val	Pro	Asp	Gly	Trp	Lys	Glu	Pro	Ala	Phe	Ser	Lys	Glu	
					35				40				45			
Asp	Asn	Pro	Arg	Gly	Leu	Leu	Glu	Glu	Ser	Ser	Phe	Ala	Thr	Leu	Phe	
					50				55				60			
Pro	Lys	Tyr	Arg	Glu	Ala	Tyr	Leu	Lys	Glu	Cys	Trp	Pro	Leu	Val	Gln	
					65				70				75			80
Lys	Ala	Leu	Asn	Glu	His	His	Val	Asn	Ala	Thr	Leu	Asp	Leu	Ile	Glu	
					85				90				95			
Gly	Ser	Met	Thr	Val	Cys	Thr	Thr	Lys	Thr	Phe	Asp	Pro	Tyr	Ile		
					100				105				110			
Ile	Ile	Arg	Ala	Arg	Asp	Leu	Ile	Lys	Leu	Leu	Ala	Arg	Ser	Val	Ser	
					115				120				125			
Phe	Glu	Gln	Ala	Val	Arg	Ile	Leu	Gln	Asp	Asp	Val	Ala	Cys	Asp	Ile	
					130				135				140			
Ile	Lys	Ile	Gly	Ser	Leu	Val	Arg	Asn	Lys	Glu	Arg	Phe	Val	Lys	Arg	
					145				150				155			160
Arg	Gln	Arg	Leu	Ile	Gly	Pro	Lys	Gly	Ser	Thr	Leu	Lys	Ala	Leu	Glu	
					165				170				175			
Leu	Leu	Thr	Asn	Cys	Tyr	Ile	Met	Val	Gln	Gly	Asn	Thr	Val	Ser	Ala	
					180				185				190			
Ile	Gly	Pro	Phe	Ser	Gly	Leu	Lys	Glu	Val	Arg	Lys	Val	Val	Leu	Asp	
					195				200				205			
Thr	Met	Lys	Asn	Ile	His	Pro	Ile	Tyr	Asn	Ile	Lys	Ser	Leu	Met	Ile	
					210				215				220			
Lys	Arg	Glu	Leu	Ala	Lys	Asp	Ser	Glu	Leu	Arg	Ser	Gln	Ser	Trp	Glu	
					225				230				235			240
Arg	Phe	Leu	Pro	Gln	Phe	Lys	His	Lys	Asn	Val	Asn	Lys	Arg	Lys	Glu	
					245				250				255			
Pro	Lys	Lys	Thr	Val	Lys	Lys	Asp	Ile	Arg	His	Ser	His	His	His		
					260				265				270			
Asn	Gln	Lys	Val	Arg	Ser	Ile	Lys	Asn	Trp	Leu	Val	Val	Asn	Thr	Phe	
					275				280				285			

<210> 696

<211> 1008

<212> DNA

<213> Homo Sapiens

<400> 696

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aacgtggcag	agaaaaagcc	caagttaaag	caacaaatga	atccgaagac	gaaatcccac	180
agctggtacc	aataggaaag	aagactccag	ctaattaaaa	agttagagatt	caaaaacatg	240
ccacaggaa	gaagtctcca	gcaaaagagtc	ctaattccag	cacacctcg	gggaagaaaa	300
agaaaaggctt	tgcgcagcatc	tgagacccca	aaagctgcag	agtctgagac	cccaggaaaa	360
agcccagaga	agaagcctaa	aatcaaagaa	gaggcagtg	aggaaaaaaag	tccttcgctg	420
gggaaaaaaag	atgcgagaca	gactccaaa	aaagccagag	gccaaagttt	tcaccattcc	480
tagtaaatct	gtgagaaaaag	cttcccacac	ccccaaaaaa	tggccaaaaa	aacccaaagt	540
accccagtcg	acctaagtc	agtgattcaa	ctggaggaa	acctcaatgc	tgcctccaga	600
gcttttgga	aatactcaga	tcctggccgc	ctttgttaacc	ttctctaaac	gtcaggcctg	660
gacttaaaaag	atttttaaa	acctccataa	gtagtccagg	ggcggtggct	cacgcctgta	720
atcccagcac	tttggggaggc	cgaggcaggc	ggatcacaag	gtcaacgaga	tgcagaccat	780
cctggccaac	atggtgaaac	cctgtctgta	ccaaaaatac	aaaaattaat	tgggcatggt	840
ggtggacacc	tgtatccca	gctactaggg	aggctgaggc	aggagaattg	cttgaacctg	900
ggaggcggag	gttgcagtga	gccactgcac	tccagcctga	tgacagagca	agactcagtc	960
tcaaaaataa	ataaaaataa	taaaacctcc	ataagtaatc	ctgaaaaaa		1008

<210> 697

<211> 685

<212> DNA

<213> Homo Sapiens

<400> 697

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<210> 698

<211> 1205

<212> DNA

<213> Homo Sapiens

<400> 698

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<210> 699
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<212> DNA
<213> Homo Sapiens

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<210> 700
<211> 1967
<212> DNA
<213> Homo Sapiens

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<210> 701
 <211> 3423
 <212> DNA
 <213> Homo Sapiens

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<211> 1106
<212> DNA
<213> Homo Sapiens

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<210> 703

<211> 1095

<212> DNA

<213> Homo Sapiens

<400> 703

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<210> 704

<211> 1968

<212> DNA

<213> Homo Sapiens

<400> 704

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<210> 705

<211> 800

<212> DNA

<213> Homo Sapiens

<400> 705

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<212> DNA

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Glu	Gln	Ser	Arg	Ser	Asp	Phe	Arg	Asn	Arg	Asp	Val	Ser	Asp	Leu	Asp	
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Gly Arg Asn Ser Asp Trp Ser Ser Asp Thr Asn Arg Gln Gly Gln Gln		
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<400> 709

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<400> 710
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 115 120 125
 Tyr Gly Ala Arg Asp Gly Pro His Gly Asp Tyr Arg Gly Gly Glu Gly
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 Pro Gly His Asp Phe Arg Gly Gly Asp Phe Ser Ser Ser Asp Phe Gln
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 Ser Arg Asp Ser Ser Gln Leu Asp Phe Arg Gly Arg Asp Ile His Ser
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 Gly Asp Phe Arg Asp Arg Glu Gly Pro Pro Met Asp Tyr Arg Gly Gly
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 Asp Gly Thr Ser Met Asp Tyr Arg Gly Arg Glu Ala Pro His Met Asn
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 Pro Pro Ser Asp Phe Arg Gly Arg Gly Thr Tyr Asp Leu Asp Phe Arg
 225 230 235 240
 Gly Arg Asp Gly Ser His Ala Asp Phe Arg Gly Arg Asp Leu Ser Asp
 245 250 255
 Leu Asp Phe Arg Ala Arg Glu Gln Ser Arg Ser Asp Phe Arg Asn Arg

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Asp Thr Pro His Ser Asp Phe Arg Gly Arg	His Arg Ser Arg Thr Asp	
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Gln Asp Phe Arg Gly Arg Glu Met Gly	Ser Cys Met Glu Phe Lys Asp	
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Arg Glu Met Pro Pro Val Asp Pro Asn Ile	Leu Asp Tyr Ile Gln Pro	
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Ser Thr Gln Asp Arg Glu His Ser Gly	Met Asn Val Asn Arg Arg Glu	
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Glu Ser Thr His Asp His Thr Ile	Glu Arg Pro Ala Phe Gly Ile Gln	
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Lys Gly Glu Phe Glu His Ser Gly	Thr Arg Glu Gly Glu Thr Gln Gly	
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Val Ala Phe Glu His Glu Ser Pro Ala	Asp Phe Gln Asn Ser Gln Ser	
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Pro Val Gln Asp Gln Asp Lys Ser Gln	Leu Ser Gly Arg Glu Glu Gln	
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Ser Ser Asp Ala Gly Leu Phe Lys	Glu Glu Gly Gly Leu Asp Phe Leu	
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Gly Arg Gln Asp Thr Asp Tyr Arg	Ser Met Glu Tyr Arg Asp Val Asp	
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His Arg Leu Pro Gly Ser Gln Met Phe	Gly Tyr Gly Gln Ser Lys Ser	
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Phe Pro Glu Gly Lys Thr Ala Arg Asp	Ala Gln Arg Asp Leu Gln Asp	
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Gln Asp Tyr Arg Thr Gly Pro Ser	Glu Glu Lys Pro Ser Arg Leu Ile	
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Met Ile Gln Asp Lys Glu Val	Thr Leu Glu Tyr Val Ser Ser Leu Asp	
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Ser Cys Ser Phe Cys Lys Asn	Pro Arg Glu Val Thr Glu Ala Lys Gln	
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Glu Pro Arg Lys Arg Glu Glu	Gly Gln Glu Ser Arg Leu Gly His Gln	
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50 55 60	
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65 70 75 80	
His Glu Thr Leu Tyr Gln Lys Ala Asp Asp Gly Arg Pro Phe Pro Gln	
85 90 95	
Val Ile Lys Ser Lys Gly Gly Val Val Gly Ile Lys Val Asp Lys Gly	
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115 120 125	
Asp Gly Leu Ser Glu Arg Cys Ala Gln Tyr Lys Lys Asp Gly Ala Asp	
130 135 140	
Phe Ala Lys Trp Arg Cys Val Leu Lys Ile Gly Glu His Thr Pro Ser	
145 150 155 160	
Ala Leu Ala Ile Met Glu Asn Ala Asn Val Leu Ala Arg Tyr Ala Ser	
165 170 175	
Ile Cys Gln Gln Asn Gly Ile Val Pro Ile Val Glu Pro Glu Ile Leu	
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Pro Asp Gly Asp His Asp Leu Lys Arg Cys Gln Tyr Val Thr Glu Lys	
195 200 205	
Val Leu Ala Ala Val Tyr Lys Ala Leu Ser Asp His His Ile Tyr Leu	
210 215 220	
Glu Gly Thr Leu Leu Lys Pro Asn Met Val Thr Pro Gly His Ala Cys	
225 230 235 240	

Thr Gln Lys Phe Ser His Glu Glu Ile Ala Met Ala Thr Val Thr Ala
 245 250 255
 Leu Arg Arg Thr Val Pro Pro Ala Val Thr Gly Ile Thr Phe Leu Ser
 260 265 270
 Gly Gly Gln Ser Glu Glu Ala Ser Ile Asn Leu Asn Ala Ile Asn
 275 280 285
 Lys Cys Pro Leu Leu Lys Pro Trp Ala Leu Thr Phe Ser Tyr Gly Arg
 290 295 300
 Ala Leu Gln Ala Ser Ala Leu Lys Ala Trp Gly Gly Lys Lys Glu Asn
 305 310 315 320
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 35 40 45
 Pro Pro Thr Tyr Pro Thr Lys Tyr Phe Gly Cys Glu Leu Gly Ala Gln
 50 55 60
 Thr Gln Phe Asp Val Lys Asn Asp Arg Tyr Ile Val Asn Gly Ser His
 65 70 75 80
 Glu Ala Asn Lys Leu Gln Asp Met Leu Asp Gly Phe Ile Lys Lys Phe
 85 90 95
 Val Leu Cys Pro Glu Cys Glu Asn Pro Glu Thr Asp Leu His Val Asn
 100 105 110
 Pro Lys Lys Gln Thr Ile Gly Asn Ser Cys Lys Ala Cys Gly Tyr Arg
 115 120 125
 Gly Met Leu Asp Thr His His Lys Leu Cys Thr Phe Ile Leu Lys Asn
 130 135 140
 Pro Pro Glu Asn Ser Asp Ile Gly Thr Gly Lys Lys Glu Lys Glu Lys
 145 150 155 160
 Lys Asn Arg Lys Gly Lys Asp Lys Glu Asn Gly Ser Val Ser Thr Ser

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Val Glu Glu Glu Asp Asp Asp	Trp Gly Glu Asp Thr Thr Glu Glu	
195	200	205
Ala Gln Arg Arg Arg Met Asp	Glu Ile Ser Asp His Ala Lys Gly Leu	
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Thr Leu Ser Asp Asp Leu Glu Arg Thr Val Glu Glu Arg Val Asn Ile		
225	230	235
Leu Phe Asp Phe Val Lys Lys Lys	Glu Glu Gly Ile Ile Asp Ser	
245	250	255
Ser Asp Lys Asp Ile Val Ala Glu Ala Glu Arg Leu Asp Val Lys Ala		
260	265	270
Met Gly Pro Leu Val Leu Thr Glu Val Leu Phe Asp Glu Lys Ile Arg		
275	280	285
Glu Gln Ile Lys Lys Tyr Arg Arg His Phe Leu Arg Phe Cys His Asn		
290	295	300
Asn Lys Lys Ala Gln Arg Tyr Leu Leu His Gly Leu Glu Cys Val Val		
305	310	315
Ala Met His Gln Ala Gln Leu Ile Ser Lys Ile Pro His Ile Leu Lys		
325	330	335
Glu Met Tyr Asp Ala Asp Leu Leu Glu Glu Glu Val Ile Ile Ser Trp		
340	345	350
Ser Glu Lys Ala Ser Lys Lys Tyr Val Ser Lys Glu Leu Ala Lys Glu		
355	360	365
Ile Arg Val Lys Ala Glu Pro Phe Ile Lys Trp Leu Lys Glu Ala Glu		
370	375	380
Glu Glu Ser Ser Gly Gly Glu Glu Glu Asp Glu Asp Glu Asn Ile Glu		
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<211> 2251

<212> DNA

<213> Homo Sapiens

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gtacagcact gttatccccaa aaagatgtgt tgctatccctg aaaatctgtt aggttctgttgc	2160
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<210> 804

<211> 609

<212> PRT

<213> Homo Sapiens

<400> 804

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20	25	30	
His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu			
35	40	45	
Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val			
50	55	60	
Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp			
65	70	75	80
Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp			
85	90	95	
Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala			
100	105	110	
Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln			
115	120	125	
His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val			
130	135	140	
Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys			
145	150	155	160
Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro			
165	170	175	
Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys			
180	185	190	
Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu			

195	200	205
Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys		
210	215	220
Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val		
225	230	235
Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser		
245	250	255
Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly		
260	265	270
Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile		
275	280	285
Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu		
290	295	300
Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp		
305	310	315
Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser		
325	330	335
Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly		
340	345	350
Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val		
355	360	365
Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys		
370	375	380
Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu		
385	390	395
Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys		
405	410	415
Glu Leu Phe Lys Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu		
420	425	430
Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val		
435	440	445
Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His		
450	455	460
Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val		
465	470	475
Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg		
485	490	495
Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe		
500	505	510
Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala		
515	520	525
Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu		
530	535	540
Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys		
545	550	555
Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala		
565	570	575
Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe		
580	585	590
Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly		
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Leu		

WO 99/04265

<211> 1356

<212> DNA

<213> Homo Sapiens

<400> 805

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ttgccagaga	actgccggtg	tggtgagttc	ccagtatggg	aggaagtgtc	caactctctg	180
ctctttgtag	acattcctgc	aaaaaaggtt	tgccgggtggg	attcattcac	caagcaagta	240
cagcgagtga	ccatggatgc	cccagtca	tccgtggctc	ttcgccagtc	gggaggctat	300
gttggccacca	ttggaacaaa	gttctgtct	ttgaactgga	aagaacaatc	agcagttgtc	360
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gcccggaggt	actttgctgg	caccatggct	gaggaaacag	ctccagcagt	tcttgagcgg	480
caccaggggg	ccctgtactc	cctctttct	gatcaccacg	tgaaaaagta	ctttgaccag	540
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gctgagggga	agctctgggt	ggcctgttac	aatggaggaa	gagtgattcg	tttagatcct	780
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tttggagggga	agaattactc	tgaaaatgtat	gtgacctgcg	cccggatgg	gatggacccc	900
gagggtctt	tgaggcaacc	tgaagctggt	ggaattttca	agataactgg	tctgggggtc	960
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tgaggcaatg	attttattaa	cagcgtaag	tttaattt	caactttaa	aaggcagagc	1140
attttaaca	aggggtgaca	ggtggtttg	ataacacact	tataaggctt	tctgtaaaag	1200
gtactataga	agggcgaaga	atcgttcaac	tgtcaatcag	cctcttgatt	ctttgtaaat	1260
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<210> 806

<211> 299

<212> PRT

<213> Homo Sapiens

<400> 806

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					20				25					30	
Asp	Ile	Pro	Ala	Lys	Lys	Val	Cys	Arg	Trp	Asp	Ser	Phe	Thr	Lys	Gln
					35				40					45	
Val	Gln	Arg	Val	Thr	Met	Asp	Ala	Pro	Val	Ser	Ser	Val	Ala	Leu	Arg
					50				55					60	
Gln	Ser	Gly	Gly	Tyr	Val	Ala	Thr	Ile	Gly	Thr	Lys	Phe	Cys	Ala	Leu
					65				70					75	80
Asn	Trp	Lys	Glu	Gln	Ser	Ala	Val	Val	Leu	Ala	Thr	Val	Asp	Asn	Asp
					85				90					95	
Lys	Lys	Asn	Asn	Arg	Phe	Asn	Asp	Gly	Lys	Val	Asp	Pro	Ala	Gly	Arg
					100				105					110	
Tyr	Phe	Ala	Gly	Thr	Met	Ala	Glu	Glu	Thr	Ala	Pro	Ala	Val	Leu	Glu
					115				120					125	
Arg	His	Gln	Gly	Ala	Leu	Tyr	Ser	Leu	Phe	Pro	Asp	His	His	Val	Lys
					130				135					140	
Lys	Tyr	Phe	Asp	Gln	Val	Asp	Ile	Ser	Asn	Gly	Leu	Asp	Trp	Ser	Leu
					145				150					155	160

Asp His Lys Ile Phe Tyr Tyr Ile Asp Ser Leu Ser Tyr Ser Val Asp
 165 170 175
 Ala Phe Asp Tyr Asp Leu Gln Thr Gly Gln Ile Ser Asn Arg Arg Ser
 180 185 190
 Val Tyr Lys Leu Glu Lys Glu Glu Gln Ile Pro Asp Gly Met Cys Ile
 195 200 205
 Asp Ala Glu Gly Lys Leu Trp Val Ala Cys Tyr Asn Gly Gly Arg Val
 210 215 220
 Ile Arg Leu Asp Pro Val Thr Gly Lys Arg Leu Gln Thr Val Lys Leu
 225 230 235 240
 Pro Val Asp Lys Thr Thr Ser Cys Cys Phe Gly Gly Lys Asn Tyr Ser
 245 250 255
 Glu Met Tyr Val Thr Cys Ala Arg Asp Gly Met Asp Pro Glu Gly Leu
 260 265 270
 Leu Arg Gln Pro Glu Ala Gly Gly Ile Phe Lys Ile Thr Gly Leu Gly
 275 280 285
 Val Lys Gly Ile Ala Pro Tyr Ser Tyr Ala Gly
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<210> 807
 <211> 1980
 <212> DNA
 <213> Homo Sapiens

<400> 807

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gggaatcttg	aatgtttgaa	tgccatcctt	atacatggag	ttgatattac	aaccagtgc	300
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caaaacagaa	ctgctctcat	gcttggttgc	gagtatggtt	gtaaggatgc	tgtagaagtc	660
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aaaattggag agacagaaaag agagtatgaa aaatcactta ctgaaatcag acagttagg	1920
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<210> 808
 <211> 659
 <212> PRT
 <213> Homo Sapiens

<400> 808		
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20 25 30		
Trp Asn Lys Tyr Asp Asp Arg Leu Met Lys Ala Ala Glu Arg Gly Asp		
35 40 45		
Val Glu Lys Val Ser Ser Ile Leu Ala Lys Lys Gly Ile Asn Pro Gly		
50 55 60		
Lys Leu Asp Val Glu Gly Arg Ser Ala Phe His Val Val Ala Ser Lys		
65 70 75 80		
Gly Asn Leu Glu Cys Leu Asn Ala Ile Leu Ile His Gly Val Asp Ile		
85 90 95		
Thr Thr Ser Asp Thr Ala Gly Arg Asn Ala Leu His Leu Ala Ala Lys		
100 105 110		
Tyr Gly His Ala Leu Cys Leu Gln Lys Leu Leu Gln Tyr Asn Cys Pro		
115 120 125		
Thr Glu His Ala Asp Leu Gln Gly Arg Thr Ala Leu His Asp Ala Ala		
130 135 140		
Met Ala Asp Cys Pro Ser Ser Ile Gln Leu Leu Cys Asp His Gly Ala		
145 150 155 160		
Ser Val Asn Ala Lys Asp Val Asp Gly Arg Thr Pro Leu Val Leu Ala		
165 170 175		
Thr Gln Met Cys Arg Pro Ala Ile Cys Gln Leu Leu Ile Asp Arg Gly		
180 185 190		
Ala Glu Ile Asn Ser Arg Asp Lys Gln Asn Arg Thr Ala Leu Met Leu		
195 200 205		
Gly Cys Glu Tyr Gly Cys Lys Asp Ala Val Glu Val Leu Leu Lys Asn		
210 215 220		
Gly Ala Asp Val Ser Leu Leu Asp Ala Leu Gly His Asp Ser Ser Tyr		
225 230 235 240		
Tyr Ala Arg Ile Gly Asp Asn Leu Asp Ile Leu Thr Leu Leu Lys Thr		
245 250 255		
Ala Ser Glu Asn Thr Asn Lys Gly Arg Glu Leu Trp Lys Lys Gly Pro		
260 265 270		
Ser Leu Gln Gln Arg Asn Leu Pro Tyr Met Leu Asp Glu Val Asn Val		
275 280 285		
Lys Ser Ser Gln Arg Glu His Arg Asn Ile Gln Glu Leu Glu Ile Glu		
290 295 300		
Asn Glu Asp Leu Lys Asp Arg Leu Arg Lys Ile Gln Gln Glu Gln Arg		
305 310 315 320		
Ile Leu Leu Asp Lys Val Asn Gly Leu Gln Leu Gln Leu Asn Glu Glu		
325 330 335		
Val Met Val Ala Asp Asp Leu Glu Ser Gln Lys Glu Lys Leu Lys Ser		
340 345 350		
Leu Leu Val Ala Lys Glu Lys Gln His Glu Glu Ser Leu Arg Thr Ile		

355	360	365
Glu Ser Leu Lys Asn Arg Phe Lys Tyr Phe Glu Cys Thr Ser Pro Gly		
370	375	380
Val Pro Ala His Met Gln Ser Arg Ser Met Leu Arg Pro Leu Glu Leu		
385	390	395
Ser Leu Pro Asn Gln Thr Ser Tyr Ser Glu Asn Asp Leu Leu Lys Lys		
405	410	415
Glu Leu Glu Ala Met Arg Thr Phe Cys Glu Ser Ala Lys Gln Asp Arg		
420	425	430
Leu Lys Leu Gln Asn Gly Val Ala His Lys Val Ala Glu Cys Lys Ala		
435	440	445
Leu Gly Leu Glu Cys Glu Arg Ile Lys Glu Asp Ser Asp Glu Gln Ile		
450	455	460
Lys Gln Leu Glu Asp Ala Leu Lys Asp Val Gln Lys Arg Met Tyr Glu		
465	470	475
Ser Glu Gly Lys Val Lys Gln Met Gln Thr His Phe Leu Ala Leu Lys		
485	490	495
Glu His Leu Thr Ser Glu Ala Ala Ile Gly Asn His Arg Leu Met Glu		
500	505	510
Glu Leu Lys Asp Gln Leu Lys Asp Met Lys Ala Lys Tyr Glu Gly Ala		
515	520	525
Ser Ala Glu Val Gly Lys Leu Arg Asn Gln Ile Lys Gln Asn Glu Leu		
530	535	540
Leu Val Glu Gln Phe Arg Arg Asp Glu Gly Lys Leu Val Glu Glu Asn		
545	550	555
Lys Arg Leu Gln Lys Glu Leu Ser Met Cys Glu Thr Glu Arg Asp Lys		
565	570	575
Lys Gly Arg Arg Val Ala Glu Val Glu Gly Gln Val Lys Glu Leu Leu		
580	585	590
Ala Lys Leu Thr Leu Ser Val Pro Thr Glu Lys Phe Glu Ser Met Lys		
595	600	605
Ser Leu Leu Ser Ser Glu Val Asn Glu Lys Val Lys Lys Ile Gly Glu		
610	615	620
Thr Glu Arg Glu Tyr Glu Lys Ser Leu Thr Glu Ile Arg Gln Leu Arg		
625	630	635
Arg Glu Leu Glu Asn Cys Lys Arg Gln Thr Ser Ser Ala Cys Gln Ala		
645	650	655
Arg Gly Ala		

<210> 809
 <211> 1725
 <212> DNA
 <213> Homo Sapiens

<400> 809
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<210> 810
 <211> 355
 <212> PRT
 <213> Homo Sapiens

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 35 40 45
 Phe Gln Thr Gly Phe Ser Gly Asn Asp Ile Ala Phe His Phe Asn Pro
 50 55 60
 Arg Phe Glu Asp Gly Gly Tyr Val Val Cys Asn Thr Arg Gln Asn Gly
 65 70 75 80
 Ser Trp Gly Pro Glu Glu Arg Lys Thr His Met Pro Phe Gln Lys Gly
 85 90 95
 Met Pro Phe Asp Leu Cys Phe Leu Val Gln Ser Ser Asp Phe Lys Val
 100 105 110
 Met Val Asn Gly Ile Leu Phe Val Gln Tyr Phe His Arg Val Pro Phe
 115 120 125
 His Arg Val Asp Thr Ile Ser Val Asn Gly Ser Val Gln Leu Ser Tyr
 130 135 140
 Ile Ser Phe Gln Asn Pro Arg Thr Val Pro Val Gln Pro Ala Phe Ser
 145 150 155 160
 Thr Val Pro Phe Ser Gln Pro Val Cys Phe Pro Pro Arg Pro Arg Gly
 165 170 175
 Arg Arg Gln Lys Pro Pro Gly Val Trp Pro Ala Asn Pro Ala Pro Ile
 180 185 190
 Thr Gln Thr Val Ile His Thr Val Gln Ser Ala Pro Gly Gln Met Phe
 195 200 205
 Ser Thr Pro Ala Ile Pro Pro Met Met Tyr Pro His Pro Ala Tyr Pro
 210 215 220

Met Pro Phe Ile Thr Thr Ile Leu Gly Gly Leu Tyr Pro Ser Lys Ser
 225 230 235 240
 Ile Leu Leu Ser Gly Thr Val Leu Pro Ser Ala Gln Arg Phe His Ile
 245 250 255
 Asn Leu Cys Ser Gly Asn His Ile Ala Phe His Leu Asn Pro Arg Phe
 260 265 270
 Asp Glu Asn Ala Val Val Arg Asn Thr Gln Ile Asp Asn Ser Trp Gly
 275 280 285
 Ser Glu Glu Arg Ser Leu Pro Arg Lys Met Pro Phe Val Arg Gly Gln
 290 295 300
 Ser Phe Ser Val Trp Ile Leu Cys Glu Ala His Cys Leu Lys Val Ala
 305 310 315 320
 Val Asp Gly Gln His Leu Phe Glu Tyr Tyr His Arg Leu Arg Asn Leu
 325 330 335
 Pro Thr Ile Asn Arg Leu Glu Val Gly Gly Asp Ile Gln Leu Thr His
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 Val Gln Thr
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<210> 811
 <211> 1022
 <212> DNA
 <213> Homo Sapiens

<400> 811
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 aagaagaggc cctgggcctg gtgggtgcac aggctcctac tactgaggag caggaggctg 180
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 cgcctgacgc agagtccctt ttcggagaag cactcagtaa caaggtggat gagttggctc 420
 attttctgct ccgcaagtat cgagccaagg agctggtcac aaaggcagaa atgctggaga 480
 gagtcataa aaattacaag cgctgtttc ctgtgatctt cggcaaagcc tccgagtc 540
 tgaagatgtat cttggcatt gacgtgaagg aagtggaccc cgccagcaac acctacaccc 600
 ttgtcacctg cctgggcctt tcctatgatg gcctgctggg taataatcg atcttccca 660
 agacaggcct cctgataatc gtcctggca caattgcaat ggagggcgcac agcgccctcg 720
 aggagggaaat ctgggaggag ctgggtgtga tgggggtgta ttaggggagg gagcacactg 780
 tctatgggaa gcccaggaaa ctgctcaccc aagattgggt gcaggaaaaac tacctggagt 840
 accggcaggt acccggcagt aatccctgcgc gctatgagtt cctgtgggtt ccaaggcctc 900
 tggctgaaac cagctatgtg aaagtcctgg agcatgttgtt cagggtcaat gcaagagttc 960
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<210> 812
 <211> 317
 <212> PRT
 <213> Homo Sapiens

<400> 812
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 20 25 30
 Thr Glu Glu Gln Glu Ala Ala Val Ser Ser Ser Pro Leu Val Leu

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35	40	45
Gly Thr Leu Glu Lys Val Pro Ala Ala Glu Ser Ala Asp Pro Pro Gln		
50	55	60
Ser Pro Gln Gly Ala Ser Ala Leu Pro Thr Thr Ile Ser Phe Thr Cys		
65	70	75
Trp Arg Gln Pro Asn Glu Gly Ser Ser Gin Glu Glu Glu Ala		80
85	90	95
Ser Thr Ser Pro Asp Ala Glu Ser Leu Phe Arg Glu Ala Leu Ser Asn		
100	105	110
Lys Val Asp Glu Leu Ala His Phe Leu Leu Arg Lys Tyr Arg Ala Lys		
115	120	125
Glu Leu Val Thr Lys Ala Glu Met Leu Glu Arg Val Ile Lys Asn Tyr		
130	135	140
Lys Arg Cys Phe Pro Val Ile Phe Gly Lys Ala Ser Glu Ser Leu Lys		
145	150	155
Met Ile Phe Gly Ile Asp Val Lys Glu Val Asp Pro Ala Ser Asn Thr		160
165	170	175
Tyr Thr Leu Val Thr Cys Leu Gly Leu Ser Tyr Asp Gly Leu Leu Gly		
180	185	190
Asn Asn Gln Ile Phe Pro Lys Thr Gly Leu Leu Ile Ile Val Leu Gly		
195	200	205
Thr Ile Ala Met Glu Gly Asp Ser Ala Ser Glu Glu Ile Trp Glu		
210	215	220
Glu Leu Gly Val Met Gly Val Tyr Asp Gly Arg Glu His Thr Val Tyr		
225	230	235
Gly Glu Pro Arg Lys Leu Leu Thr Gln Asp Trp Val Gln Glu Asn Tyr		240
245	250	255
Leu Glu Tyr Arg Gln Val Pro Gly Ser Asn Pro Ala Arg Tyr Glu Phe		
260	265	270
Leu Trp Gly Pro Arg Ala Leu Ala Glu Thr Ser Tyr Val Lys Val Leu		
275	280	285
Glu His Val Val Arg Val Asn Ala Arg Val Arg Ile Ala Tyr Pro Ser		
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Leu Arg Glu Ala Ala Leu Leu Glu Glu Glu Gly Val		
305	310	315

<210> 813
 <211> 5175
 <212> DNA
 <213> Homo Sapiens

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aggcaaagga gaaacagctc tgacatacaa agaaaaatgag tatgctaaag ccaagtggc	180
ttaaggcccc caccaagatc ctgaagcctg gaagcacagc tctgaagaca cctacggctg	240
ttgttagctcc agtagaaaaa accatatcca gtaaaaaagc atcaagcact ccatcatctg	300
agactcagga ggaatttgtg gatgacttgc gagttggga gcgagtttg gtgaatggaa	360
ataagcctgg atttatccag tttcttggag aaacccagtt tgcaccaggc cagtgggctg	420
gaattttt agatgaaccc ataggcaaga acgatggtc ggtggcagga gttcggatt	480
tccagtgtga acctttaaag ggcattatcc cccgaccc tc aaagttaaca aggaagggtgc	540
aaggcagaaga tgaagctaat ggcctgcaga caacgcccgc ctcccgagct acttcaccgc	600
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agaaaaccatc acagccagca gcaaaggaac cttcagctac gcctccgatc agcaacctta	720
caaaaaactgc cagtgaatct atctccaacc tttcagagggc tggctcaatc aagaaaggag	780

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gcagcccttc	tgccctttcc	ctcagctcca	tgagctc当地	ggcctcccttct	gtgagcagca	1140
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<210> 814  
<211> 1392  
<212> PRT  
<213> Homo Sapiens
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<400> 814
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 20 25 30
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 35 40 45
 Glu Thr Gln Glu Glu Phe Val Asp Asp Phe Arg Val Gly Glu Arg Val
 50 55 60
 Trp Val Asn Gly Asn Lys Pro Gly Phe Ile Gln Phe Leu Gly Glu Thr
 65 70 75 80
 Gln Phe Ala Pro Gly Gln Trp Ala Gly Ile Val Leu Asp Glu Pro Ile
 85 90 95
 Gly Lys Asn Asp Gly Ser Val Ala Gly Val Arg Tyr Phe Gln Cys Glu
 100 105 110
 Pro Leu Lys Gly Ile Phe Thr Arg Pro Ser Lys Leu Thr Arg Lys Val
 115 120 125
 Gln Ala Glu Asp Glu Ala Asn Gly Leu Gln Thr Thr Pro Ala Ser Arg
 130 135 140
 Ala Thr Ser Pro Leu Cys Thr Ser Thr Ala Ser Met Val Ser Ser Ser
 145 150 155 160
 Pro Ser Thr Pro Ser Asn Ile Pro Gln Lys Pro Ser Gln Pro Ala Ala
 165 170 175
 Lys Glu Pro Ser Ala Thr Pro Pro Ile Ser Asn Leu Thr Lys Thr Ala
 180 185 190
 Ser Glu Ser Ile Ser Asn Leu Ser Glu Ala Gly Ser Ile Lys Lys Gly
 195 200 205
 Glu Arg Glu Leu Lys Ile Gly Asp Arg Val Leu Val Gly Gly Thr Lys

210	215	220
Ala Gly Val Val Arg Phe Leu Gly Glu Thr Asp Phe Ala Lys Gly Glu		
225	230	235
Trp Cys Gly Val Glu Leu Asp Glu Pro Leu Gly Lys Asn Asp Gly Ala		240
245	250	255
Val Ala Gly Thr Arg Tyr Phe Gln Cys Gln Pro Lys Tyr Gly Leu Phe		
260	265	270
Ala Pro Val His Lys Val Thr Lys Ile Gly Phe Pro Ser Thr Thr Pro		
275	280	285
Ala Lys Ala Lys Ala Asn Ala Val Arg Arg Val Met Ala Thr Thr Ser		
290	295	300
Ala Ser Leu Lys Arg Ser Pro Ser Ala Ser Ser Leu Ser Ser Met Ser		
305	310	315
Ser Val Ala Ser Ser Val Ser Ser Arg Pro Ser Arg Thr Gly Leu Leu		320
325	330	335
Thr Glu Thr Ser Ser Arg Tyr Ala Arg Lys Ile Ser Gly Thr Thr Ala		
340	345	350
Leu Gln Glu Ala Leu Lys Glu Lys Gln Gln His Ile Glu Gln Leu Leu		
355	360	365
Ala Glu Arg Asp Leu Glu Arg Ala Glu Val Ala Lys Ala Thr Ser His		
370	375	380
Val Gly Glu Ile Glu Gln Glu Leu Ala Leu Ala Arg Asp Gly His Asp		
385	390	395
Gln His Val Leu Glu Leu Glu Ala Lys Met Asp Gln Leu Arg Thr Met		400
405	410	415
Val Glu Ala Ala Asp Arg Glu Lys Val Glu Leu Leu Asn Gln Leu Glu		
420	425	430
Glu Glu Lys Arg Lys Val Glu Asp Leu Gln Phe Arg Val Glu Glu Glu		
435	440	445
Ser Ile Thr Lys Gly Asp Leu Glu Val Ala Thr Val Ser Glu Lys Ser		
450	455	460
Arg Ile Met Glu Leu Glu Lys Asp Leu Ala Leu Arg Val Gln Glu Val		
465	470	475
Ala Glu Leu Arg Arg Leu Glu Ser Asn Lys Pro Ala Gly Asp Val		480
485	490	495
Asp Met Ser Leu Ser Leu Leu Gln Glu Ile Ser Ser Leu Gln Glu Lys		
500	505	510
Leu Glu Val Thr Arg Thr Asp His Gln Arg Glu Ile Thr Ser Leu Lys		
515	520	525
Glu His Phe Gly Ala Arg Glu Glu Thr His Gln Lys Glu Ile Lys Ala		
530	535	540
Leu Tyr Thr Ala Thr Glu Lys Leu Ser Lys Glu Asn Glu Ser Leu Lys		
545	550	555
Ser Lys Leu Glu His Ala Asn Lys Glu Asn Ser Asp Val Ile Ala Leu		560
565	570	575
Trp Lys Ser Lys Leu Glu Thr Ala Ile Ala Ser His Gln Gln Ala Met		
580	585	590
Glu Glu Leu Lys Val Ser Phe Ser Lys Gly Leu Gly Thr Glu Thr Ala		
595	600	605
Glu Phe Ala Glu Leu Lys Thr Gln Ile Glu Lys Met Arg Leu Asp Tyr		
610	615	620
Gln His Glu Ile Glu Asn Leu Gln Asn Gln Gln Asp Ser Glu Arg Ala		
625	630	635
Ala His Ala Lys Glu Met Glu Ala Leu Arg Ala Lys Leu Met Lys Val		640
645	650	655

Ile Lys Glu Lys Asn Ser Leu Glu Ala Ile Arg Ser Lys Leu Asp
 660 665 670
 Lys Ala Glu Asp Gln His Leu Val Glu Met Glu Asp Thr Leu Asn Lys
 675 680 685
 Leu Gln Glu Ala Glu Ile Lys Val Lys Glu Leu Glu Val Leu Gln Ala
 690 695 700
 Lys Cys Asn Glu Gln Thr Lys Val Ile Asp Asn Phe Thr Ser Gln Leu
 705 710 715 720
 Lys Ala Thr Glu Glu Lys Leu Leu Asp Leu Asp Ala Leu Arg Lys Ala
 725 730 735
 Ser Ser Glu Gly Lys Ser Glu Met Lys Lys Leu Arg Gln Gln Leu Glu
 740 745 750
 Ala Ala Glu Lys Gln Ile Lys His Leu Glu Ile Glu Lys Asn Ala Glu
 755 760 765
 Ser Ser Lys Ala Ser Ser Ile Thr Arg Glu Leu Gln Gly Arg Glu Leu
 770 775 780
 Lys Leu Thr Asn Leu Gln Glu Asn Leu Ser Glu Val Ser Gln Val Lys
 785 790 795 800
 Glu Thr Leu Glu Lys Glu Leu Gln Ile Leu Lys Glu Lys Phe Ala Glu
 805 810 815
 Ala Ser Glu Glu Ala Val Ser Val Gln Arg Ser Met Gln Glu Thr Val
 820 825 830
 Asn Lys Leu His Gln Lys Glu Glu Gln Phe Asn Met Leu Ser Ser Asp
 835 840 845
 Leu Glu Lys Leu Arg Glu Asn Leu Ala Asp Met Glu Ala Lys Phe Arg
 850 855 860
 Glu Lys Asp Glu Arg Glu Glu Gln Leu Ile Lys Ala Lys Glu Lys Leu
 865 870 875 880
 Glu Asn Asp Ile Ala Glu Ile Met Lys Met Ser Gly Asp Asn Ser Ser
 885 890 895
 Gln Leu Thr Lys Met Asn Asp Glu Leu Arg Leu Lys Glu Arg Asp Val
 900 905 910
 Glu Glu Leu Gln Leu Lys Leu Thr Lys Ala Asn Glu Asn Ala Ser Phe
 915 920 925
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 930 935 940
 Gln Glu Ala Ala Lys Lys His Glu Glu Glu Lys Lys Glu Leu Glu Arg
 945 950 955 960
 Lys Leu Ser Asp Leu Glu Lys Lys Met Glu Thr Ser His Asn Gln Cys
 965 970 975
 Gln Glu Leu Lys Ala Arg Tyr Glu Arg Ala Thr Ser Glu Thr Lys Thr
 980 985 990
 Lys His Glu Glu Ile Leu Gln Asn Leu Gln Lys Thr Leu Leu Asp Thr
 995 1000 1005
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 Thr Ala Glu Asp Ala Met Gln Ile Met Glu Gln Met Thr Lys Glu Lys
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 1060 1065 1070
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 1075 1080 1085
 Glu Glu Leu Asn Lys Ser Lys Glu Leu Leu Thr Val Glu Asn Gln Lys

1090	1095	1100
Met Glu Glu Phe Arg Lys Glu Ile Glu Thr Leu Lys Gln Ala Ala Ala		
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Gln Lys Ser Gln Gln Leu Ser Ala Leu Gln Glu Glu Asn Val Lys Leu		112
1125	1130	1135
Ala Glu Glu Leu Gly Arg Ser Arg Asp Glu Val Thr Ser His Gln Lys		
1140	1145	1150
Leu Glu Glu Glu Arg Ser Val Leu Asn Asn Gln Leu Leu Glu Met Lys		
1155	1160	1165
Lys Arg Glu Ser Lys Phe Ile Lys Asp Ala Asp Glu Glu Lys Ala Ser		
1170	1175	1180
Leu Gln Lys Ser Ile Ser Ile Thr Ser Ala Leu Leu Thr Glu Lys Asp		
1185	1190	1195
Ala Glu Leu Glu Lys Leu Arg Asn Glu Val Thr Val Leu Arg Gly Glu		120
1205	1210	1215
Asn Ala Ser Ala Lys Ser Leu His Ser Val Val Gln Thr Leu Glu Ser		
1220	1225	1230
Asp Lys Val Lys Leu Glu Leu Lys Val Lys Asn Leu Glu Leu Gln Leu		
1235	1240	1245
Lys Glu Asn Lys Arg Gln Leu Ser Ser Ser Gly Asn Thr Asp Thr		
1250	1255	1260
Gln Ala Asp Glu Asp Glu Arg Ala Gln Glu Ser Gln Ile Asp Phe Leu		
1265	1270	1275
Asn Ser Val Ile Val Asp Leu Gln Arg Lys Asn Gln Asp Leu Lys Met		128
1285	1290	1295
Lys Val Glu Met Met Ser Glu Ala Ala Leu Asn Gly Asn Gly Asp Asp		
1300	1305	1310
Leu Asn Asn Tyr Asp Ser Asp Asp Gln Glu Lys Gln Ser Lys Lys Lys		
1315	1320	1325
Pro Arg Leu Phe Cys Asp Ile Cys Asp Cys Phe Asp Leu His Asp Thr		
1330	1335	1340
Glu Asp Cys Pro Thr Gln Ala Gln Met Ser Glu Asp Pro Pro His Ser		
1345	1350	1355
Thr His His Gly Ser Arg Gly Glu Glu Arg Pro Tyr Cys Glu Ile Cys		136
1365	1370	1375
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<211> 647

<212> DNA

<213> Homo Sapiens

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<211> 152
<212> PRT
<213> Homo Sapiens

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35 40 45
Lys Gln His Tyr Ile Asp Leu Lys Asp Arg Pro Phe Phe Pro Gly Leu
50 55 60
Val Lys Tyr Met Asn Ser Gly Pro Val Val Ala Met Val Trp Glu Gly
65 70 75 80
Leu Asn Val Val Lys Thr Gly Arg Val Met Leu Gly Glu Thr Asn Pro
85 90 95
Ala Asp Ser Lys Pro Gly Thr Ile Arg Gly Asp Phe Cys Ile Gln Val
100 105 110
Gly Arg Asn Ile Ile His Gly Ser Asp Ser Val Lys Ser Ala Glu Lys
115 120 125
Glu Ile Ser Leu Trp Phe Lys Pro Glu Glu Leu Val Asp Tyr Lys Ser
130 135 140
Cys Ala His Asp Trp Val Tyr Glu
145 150

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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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(21) International Application Number: PCT/US98/14679			[UA/GB]; 91 Riding House Street, London W1P 8BT (GB).
(22) International Filing Date: 15 July 1998 (15.07.98)			O'HARE, Michael [GB/GB]; 91 Riding House Street, London W1P 8BT (GB). OBATA, Yuichi [JP/JP]; Chikusa-Ku, Nagoya 464 (JP). PFREUNDSCHUH, Michael [DE/DE]; Innere Medizin 1, D-66421 Homburg/Saar (DE). TURECI, Ozlem [DE/DE]; Innere Medizin 1, D-66421 Homburg/Saar (DE). SAHIN, Ugur [TR/DE]; Innere Medizin 1, D-66421 Homburg/Saar (DE).
(30) Priority Data: 08/896,164 17 July 1997 (17.07.97) US 60/061,599 10 October 1997 (10.10.97) US 60/061,765 10 October 1997 (10.10.97) US 08/948,705 10 October 1997 (10.10.97) US 9721697.2 11 October 1997 (11.10.97) GB 09/102,322 22 June 1998 (22.06.98) US			(74) Agent: VAN AMSTERDAM, John, R.; Wolf, Greenfield & Sacks, P.C., 600 Atlantic Avenue, Boston, MA 02210 (US).
(71) Applicant (for all designated States except US): LUDWIG INSTITUTE FOR CANCER RESEARCH [CH/US]; 605 Third Avenue, New York, NY 10158 (US).			(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
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(54) Title: CANCER ASSOCIATED NUCLEIC ACIDS AND POLYPEPTIDES

(57) Abstract

Tumor cell-specific antigens from melanoma cells have previously been identified using autologous cytolytic T cells clones from the patient, but the same approach did not work well with other tumour types. Here, screening of such antigens was successfully performed using antisera from the patient. Provided are several tumor cell-specific antigens, nucleic acids encoding them, antibodies and CTL's directed against these antigens, antigenic fragments diagnostic kits, etc.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 C12N15/12	C07K14/705	C12Q1/68	G01N33/53	C07K16/28
A61K38/17	A61K31/70	A61K39/00	A61K35/12	A61K39/395
A61K48/00				

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 C12N C07K A61K G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>WO 97 17470 A (HOLLAND JAMES F) 15 May 1997</p> <p>Also against claims 82-84,116,117 see whole document, particularly the claims</p> <p>---</p> <p>-/-</p>	<p>1,2, 4-10,18, 21-23, 27,28, 31,32, 40,42, 44,45, 48-51, 58-60, 67-70, 76-79</p>

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

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Date of the actual completion of the international search

Date of mailing of the international search report

3 June 1999

29.06.1999

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Smalt, R

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International Application No
PCT/JP 98/14679

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	see the whole document, particularly the claims and seq. 1 and 2. Also against claims 70-72,74,76-80,82-85,88,89,99-104,108-111, 116,117. see page 18, line 20 - page 22, line 33 ---	
		-/-

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Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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X	MINEGISHI, M. ET AL.: "Structure and function of Cas-L, a 105 kD Crk-associated substructure-related protein that is involved in beta-1 integrin-mediated signaling in lymphocytes." JOURNAL OF EXPERIMENTAL MEDICINE, vol. 184, no. 4, 1 October 1996, pages 1365-75, XP002103183 also against claims 116 and 117 see figure 4 ---	18, 21-23, 27-29, 31,32, 37,40, 44,45, 47-50, 56, 58-60, 65, 67-72, 74-80, 82-84
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X	<p>ONO M ET AL: "NUCLEOTIDE SEQUENCE OF HUMAN ENDOGENOUS RETROVIRUS GENOME RELATED TO THE MOUSE MAMMARY TUMOR VIRUS GENOME" JOURNAL OF VIROLOGY, vol. 60, no. 2, 1 November 1986, pages 589-598, XP000673638 see page 597, left-hand column, paragraph 5 - right-hand column, paragraph 1; figure 1</p> <p>---</p>	44,45, 47,48, 59,60, 67-72,74
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Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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X	DATABASE EMBL - EMEST20 Entry/Acc.no. T09468, 8 August 1993 ADAMS, M.D. ET AL.: "EST07361 Homo sapiens cDNA clone HIBBU63 5' end." XP002103195 see the whole document -& ADAMS, M.D. ET AL.: "Rapid DNA sequencing (expressed sequence tags) from a directionally cloned human infant brain cDNA library." NATURE GENETICS, vol. 4, 1993, pages 373-380, XP000574910 see the whole document ---	44, 45, 67, 70
X	DATABASE EMBL - EMEST17 Entry HSZZ32361, Acc.no. AA327309, 18 April 1997 ADAMS, M.D. ET AL.: "EST30621 Colon I Homo sapiens cDNA 5' end." XP002103199 see the whole document -& ADAMS, M.D. ET AL.: "Initial assessment of human gene diversity and expression patterns based upon 83 million nucleotides of cDNA sequence." NATURE, vol. 377, 1995, pages 3-17, XP002042918 see the whole document ---	44, 45, 60, 62, 67, 70

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Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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X	DATABASE EMBL - EMEST11 Entry HS1282878, Acc.no. AA487071, 28 June 1997 HILLIER, L. ET AL.: "ab18f11.s1 Stratagene lung (#937210) Homo sapiens cDNA clone 841197 3' similar to contains Alu repetitive element." XP002103197 see the whole document ---	44,45, 67,70
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Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE EMBL - EMEST16 Entry HSAA51187, Acc.no. AA151187, 15 December 1996 HILLIER, L. ET AL.: "z003c11.r1 Stratagene colon (#937204) Homo sapiens cDNA clone 566612 5'." XP002103208 see the whole document	44,45, 60,62, 67,70
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X	LI, H. ET AL.: "Isolation and sequence analysis of the human syntaxin-encoding gene." GENE, vol. 143, 1994, pages 303-4, XP002103182 see the whole document	44,45, 47,48, 59,60, 65, 70-72, 74,83,84
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Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE EMBL - EMEST11 Entry HS125289, Acc.no. AA454221, 11 June 1997 HILLIER, L. ET AL.: "zx48g12.rl Soares testis NHT Homo sapiens cDNA clone 795526 5' similar to TR:E243068 E243068 KINASE." XP002103190 see the whole document ---	67,69
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A	WO 92 20356 A (LUDWIG INST CANCER RES) 26 November 1992 see the whole document, particularly the claims ---	1-11, 17-33, 39-52, 58-61, 67-117
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A	FRANZÉN, B. ET AL.: "Analysis of polypeptide expression in benign and malignant human breast lesions: down-regulation of cytokeratins." BRITISH JOURNAL OF CANCER, vol. 73, 1996, pages 1632-8, XP002104551 see abstract ---	1,2,4-9, 13
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A	SAHIN, U. ET AL.: "Human neoplasms elicit multiple specific immune responses in the autologous host." PROC.NATL.ACAD.SCI.USA, vol. 92, December 1995, pages 11810-3, XP002091914 cited in the application see the whole document ---	
P,X	DATABASE EMBL - EMHUM1 Entry/Acc.no. AC004022, 22 January 1998 HINDS, K. ET AL.: "Homo sapiens BAC clone GS155M11 from 7q21-q22, complete sequence." XP002091837 from nt.330-810 ---	1,2
P,X	ALAIYA, A.A. ET AL.: "Phenotypic analysis of ovarian carcinoma: polypeptide expression in benign, borderline and malignant tumors." JOURNAL OF CANCER, vol. 73, no. 5, 27 November 1997, pages 678-83, XP002104552 see abstract; figure 2 ---	1-10,15
P,X	GÜRE, A.O. ET AL.: "Human lung cancer antigens recognized by autologous antibodies: definition of a novel cDNA derived from the tumor suppressor gene locus on chromosome 3p21.3" CANCER RESEARCH, vol. 58, 1 March 1998, pages 1034-41, XP002103188 see the whole document ---	1,2,4,5, 9,14,18, 21,22, 27,44, 45,49, 50,55, 59,60, 64, 67-70, 83,84
P,X	SCANLAN, M.J. ET AL.: "Characterization of human colon cancer antigens recognized by autologous antibodies" INTERNATIONAL JOURNAL OF CANCER, 29 May 1998, pages 652-8, XP002103186 see the whole document ---	31,32, 34,40, 59,60, 62, 67-70, 83,84, 116

INTERNATIONAL SEARCH REPORT

International Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	NAGASE, T. ET AL.: "Prediction of the coding sequence of unidentified human genes. IX. The complete sequence of 100 new cDNA clones from brain which can code for large proteins in vivo." DNA RESEARCH, vol. 5, 28 February 1998, pages 31-39, XP002103187 see figure 1; table 3 -& DATABASE EMBL Entry/acc.no. AB011172, 10 April 1998 NAGASE, T. ET AL.: "Homo sapiens mRNA for KIAA0600 protein, partial cds." XP002104556 see the whole document ---	44,45, 67-70, 83,84
P,X	JONES, M.H. ET AL.: "Identification and characterization of BRDT: a testis-specific gene related to the bromodomain genes RING3 and Drosophila fsh." GENOMICS, vol. 45, no. 3, 1 November 1997, pages 529-34, XP002103185 see page 529, right-hand column, paragraph 2 see page 530, left-hand column, paragraph 2; figure 1 see page 532, right-hand column, paragraph 2 ---	44,45, 59,60, 67-70, 83,84
P,X	ISHIKAWA K ET AL: "Prediction of the coding sequences of unidentified human genes. X The complete sequences of 100 new cDNA clones from brain which can code for large proteins in vitro" DNA RESEARCH, vol. 5, no. 321, 30 June 1998, pages 169-176, XP002089186 see abstract; figures 1,2; table 2 ---	44,59, 60,63, 67-70
E	US 5 858 723 A (MUELLER-LANTZSCH NIKOLAUS ET AL) 12 January 1999 Also against claims 108,109,116,117 see the whole document ---	1,2, 4-10,31, 32,40, 42,43, 49,50, 58-60, 67,69, 71,72, 74-79, 82-84, 99-104

INTERNATIONAL SEARCH REPORT

International Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	WO 98 40483 A (HUMAN GENOME SCIENCES INC ;GREENE JOHN M (US); LI YI (US); ROSEN C) 17 September 1998 Also against claims 74,76-80,82-85,88,89, 99-104,108,109,111,116,117. See seq. 24 and the claims. ---	1,2, 4-10,14, 18, 21-24, 27,28, 31,32, 36,40, 44,45, 47-50, 55, 58-60, 64,67-72
E	WO 98 08866 A (WISTAR INST) 5 March 1998 see the whole document ---	1,2
E	WO 98 48015 A (CHUGAI RES INST MOLECULAR MED ;JONES MICHAEL H CHUGAI RESEARC (JP)) 29 October 1998 see whole document, particularly the claims. & DATABASE WPI Derwent Publications Ltd., London, GB; AN 98-583658 XP002103211 see abstract ---	18,22, 23, 27-29, 31,32, 40, 44-50, 58-60, 67-72, 74, 76-78, 85,88, 89,102, 103
E	WO 98 32853 A (GENETICS INST) 30 July 1998 see seq. 7 and 8 see page 6, line 23 - page 8, line 12; claims 20-22 see page 21, line 17 - page 22, line 11 ---	18,21, 22,24, 27-29, 44,45, 47-50, 53,59, 60,62, 67-72, 74, 76-80,82

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INTERNATIONAL SEARCH REPORT

Int'l Application No

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
T	<p>SCANLAN, M.J. ET AL.: "Isoforms of the human PDZ-73 protein exhibit differential tissue expression" <i>BIOCHIMICA ET BIOPHYSICA ACTA</i>, vol. 1445, no. 1, 1999, pages 39-52, XP002104553 also for claims 77-80, 82-84, 116. see the whole document</p> <p>---</p>	
T	<p>DRABKIN, H.A. ET AL.: "DEF-3(g16/NY-LU-12), an RNA binding protein from the 3p21.3 homozygous deletion region in SCLC" <i>ONCOGENE</i>, vol. 18, 1999, pages 2589-97, XP002104554 see the whole document</p> <p>-----</p>	

INTERNATIONAL SEARCH REPORT

International application No.
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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
Although claims 85-111 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
1-14,17-36,39-55,58-64,67-117; see additional sheets, pages 3-4.
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

Invention 1: claims 1-11,17-33,39-52,58-61,67-117,
all partially

The nucleic acid sequence of Seq.ID 1, fragments or complements thereof, and the corresponding polypeptide(s) encoded thereby, and immunogenic and/or HLA binding fragments thereof, optionally as part of a complex with a HLA molecule, an expression vector comprising said nucleic acid, and optionally a human HLA molecule, a host cell transformed with said vector, and an antibody against said polypeptide(s).

Also a method of diagnosing of a disorder characterised by overexpression of said polypeptide(s) and a method for determining regression, progression or onset of a disease associated with overexpression of said polypeptide(s), using agents that specifically bind to said nucleic acid, said polypeptide(s) or complexes of (fragments of) said polypeptide(s) and a HLA molecule. A kit comprising two polynucleotides for the detection of said nucleic acid

Also pharmaceutical preparations

- which enrich the presence of said polypeptide-HLA complex, optionally comprising an adjuvant, or
- which inhibits the expression of said polypeptide(s), or
- comprising an agent that selectively binds said polypeptide, optionally as a conjugate with a diagnostic or therapeutic compound, or
- comprising said nucleic acid, optionally in an expression vector, optionally in a host cell, or
- comprising said polypeptide(s), optionally in combination with an adjuvant, or
- comprising cytolytic T cells, specific for said polypeptide-HLA complex, or
- comprising an antibody against said polypeptide(s).

Inventions 2-119: claims 1-11,13,15,17-33,35,37,
39-52,54,56,58-61,63,65,67-117, all partially (1)

Inventions 2-119: Idem as subject 1 but limited to each of the DNA sequences as in Seq.ID:2-40,66,89-169 (odd numbers), 170,172,174, and 176-210, where invention 2 is limited to Seq.ID:2 and corresponding polypeptides encoded thereby, invention 3 is limited to Seq.ID:3 and corresponding polypeptides encoded thereby,....., and invention 119 is limited to Seq.ID:210 and corresponding polypeptides encoded thereby.

Invention 120: claims 1-10,13,17-32,35,
39-51,54,58-60,63,67-117, all partially

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Idem as subject 1 but limited to the DNA sequences seq.ID:211 and 329 and corresponding polypeptides encoded thereby.

Inventions 121-452: claims 1-10,13,16-32,35,38-51, 54,57-60,63,66-117, all partially (1)

Inventions 121-452: Idem as subject 1 but limited to each of the DNA sequences as in Seq.ID:212-328, and 330-543, where invention 121 is limited to Seq.ID:211 and corresponding polypeptides encoded thereby, invention 122 is limited to Seq.ID:212 and corresponding polypeptides encoded thereby,....., and invention 452 is limited to Seq.ID:543 and corresponding polypeptides encoded thereby.

Invention 453: claims 1-10,12,17-32,34,39-51,53, 58-60,62,67-117, all partially

Idem as subject 1 but limited to the DNA sequences seq.ID:544 and 554 and corresponding polypeptides encoded thereby.

Inventions 454 and 455: claims 1-10,12,17-32,34, 39-51,53,58-60,62,67-117, all partially

Inventions 454 and 455: Idem as subject 1 but limited to each of the DNA sequences as in Seq.ID:546 and 548, where invention 454 is limited to Seq.ID:546 and corresponding polypeptides encoded thereby, and invention 455 is limited to Seq.ID:548 and corresponding polypeptides encoded thereby.

Invention 456: claims 1-10,12,17-32,34,39-51,53, 58-60,62,67-117, all partially

Idem as subject 1 but limited to each of the DNA sequences as in Seq.ID:550, 552, 556, 558 and 560 and corresponding polypeptides encoded thereby.

Inventions 457-582: claims 1-10,12-14,17-32,34-36, 39-51,53-55,58-60,62-64,67-117, all partially (1)

Inventions 457-582: Idem as subject 1 but limited to each of the DNA sequences as in Seq.ID:562-586 (even numbers),

588-683, 686, 687, 689, 691, 692, 692, and 696-706, where invention 457 is limited to Seq.ID:562 and corresponding polypeptides encoded thereby, invention 458 is limited to Seq.ID:564 and corresponding polypeptides encoded thereby,....., and invention 582 is limited to Seq.ID:706 and corresponding polypeptides encoded thereby.

Invention 583: claims 1-10, 14, 17-32, 36, 39-51, 55, 58-60, 64, 67-117, all partially

Idem as subject 1 but limited to each of the DNA sequences as in Seq.ID:707, 709, 711 and 712 and corresponding polypeptides encoded thereby.

Inventions 584-592: claims 1-117, all partially (1)

Inventions 584-592: Idem as subject 1 but limited to each of the DNA sequences as in Seq.ID:799-815 (odd numbers), where invention 584 is limited to Seq.ID:799 and corresponding polypeptides encoded thereby, invention 585 is limited to Seq.ID:801 and corresponding polypeptides encoded thereby,....., and invention 592 is limited to Seq.ID:815 and corresponding polypeptides encoded thereby).

For the sake of conciseness, the subject matter of the first invention is explicitly defined, the other subject matters are defined by analogy thereto.

(1) In as far as the claims searched for a group of inventions refer to specific groups of sequences, only those claims which refer to the groups comprising the nucleic acid sequence of a particular invention, and/or its corresponding polypeptide sequence(s), form parts of that invention.

Due to the fact that extensive sequence homologies were found between several groups of sequences during the additional searches, some of the sequences have been grouped, whereby each of these groups comprising two or more such homologous sequences is considered to be one invention.

Claims searched during primary and additional searches:
1-14, 17-36, 39-55, 58-64, 67-117, limited to:

Invention 1, seq.ID.1
Invention 52, seq.ID.111, and 112 (transl.)
Invention 61, seq.ID.129, and 130 (transl.)
Invention 71, seq.ID.149, and 150 (transl.)
Invention 72, seq.ID.151, and 152 (transl.)
Invention 116, seq.ID.206
Invention 120, seq.ID.211 and 329; (related sequences)
Invention 137, seq.ID.228
Invention 139, seq.ID.330

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Invention 219, seq.ID.411
Invention 453, seq.ID.544, and 545 (transl.),
and seq.ID.554, and 555 (transl.);
(related sequences)
Invention 454, seq.ID.546, and 547 (transl.)
Invention 455, seq.ID.548, and 548 (transl.)
Invention 456, seq.ID.550, and 551 (transl.),
and seq.ID.552, and 553 (transl.),
and seq.ID.556, and 557 (transl.),
and seq.ID.558, and 559 (transl.),
and seq.ID.560, and 561 (transl.);
(related sequences)
Invention 547 seq.ID.665
Invention 548, seq.ID.666
Invention 554, seq.ID.672
Invention 558, seq.ID.676
Invention 563, seq.ID.681
Invention 566, seq.ID.686
Invention 583, seq.ID.707, and 708 (transl.),
and seq.ID.709, and 710 (transl.),
and seq.ID.711,
and seq.ID.712;
(related sequences).

INTERNATIONAL SEARCH REPORT

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